



DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
3000 MARINE CORPS PENTAGON
WASHINGTON DC 20350-3000

MCO 3710.7
AVN
09 APR 2018

MARINE CORPS ORDER 3710.7

From: Commandant of the Marine Corps
To: Distribution List

Subj: MARINE CORPS AVIATION CURRENT READINESS PROGRAM

Ref: (a) COMNAVAIRPACINST/COMNAVAIRLANTINST 3510.11c
(b) COMNAVAIRFORINST 5442.1A
(c) Marine Aviation Plan
(d) Msg 140957Z JUL 06 CMC Washington DC AVN
(e) Msg 270925Z JUL 06 CMC Washington DC AVN
(f) Msg 201135Z SEP 06 CMC Washington DC AVN
(g) Msg 151427Z DEC 06 CMC Washington DC AVN
(h) DCA ltr dtd 12 Jun 07 (MAERB Charter)
(i) MCO 3000.13
(j) MCO 3125.1B
(k) 5 U.S.C. 552a
(l) SECNAVINST 5211.5E
(m) SECNAV M-5210.2

Encl: (1) Marine Corps Aviation Current Readiness Standard Operating Procedures & Commander's Guidebook to the Naval Aviation Enterprise

1. Situation. The Marine Aviation Current Readiness (CR) program is an essential enabler to the efficient generation of combat readiness and the endless effort of preserving the quality of aviation equipment. Per the references, this Order provides policy, guidance, and responsibilities to improve readiness through integration with the Naval Aviation Enterprise (NAE).

2. Mission. Marine Corps Aviation commanders and leaders, in concert with the NAE, will plan, execute, and manage the CR process to maximize the availability of aviation equipment and personnel. The CR process will inform decisions on material resource allocations and expenditures, minimize logistics downtime and delays through aggressive collaboration with service providers, and produce core competent aviation units and detachments with the required readiness for warfighting missions.

3. Execution

a. Commander's Intent. I intend for Marine Aviation to master the CR process. Doing so will enable aviation commanders to enhance readiness by using more accurate and actionable information of

DISTRIBUTION STATEMENT A: Approved for public release;
distribution is unlimited

readiness drivers, isolating root causes of problems, and shaping future resource decisions.

b. Objectives. We will generate required and sustained combat mission availability for Marine Aviation through a methodology that is focused and holistic, and which maximizes the probability to fully achieve all goals. The processes and tools of CR are designed to support the following key objectives:

(1) Support Title 10 responsibilities by providing properly manned, fully trained and supported, and well-maintained Marine Aviation units.

(2) Fund and resource Marine Aviation platforms and ancillary systems by accurately assessing and managing cost and resource drivers (e.g. flying hours, aircraft, manpower, supply support, etc.).

(3) Apply a set of standard integrated metrics for operations, training, manning, logistics, and resource utilization, and exploit the systemic interrelationships of these elements to enhance readiness.

(4) Employ Type/Model/Series (TMS) Teams to optimally manage the effectiveness and health of Marine Aviation units.

(5) Optimally manage airframes and aircraft systems to meet programmed service and operating life.

(6) Increase the strength and transparency of the linkage between logistics/provider chains and unit readiness requirements by using Mission Essential Task-based (MET-based) standards.

c. Concept of Operations. All members of Marine Corps Aviation from Headquarters leadership and staff to the operating forces shall take an active role in the NAE processes as defined in enclosure (1). Even though the NAE flattens the communication between aviation stakeholders, Title 10 relationships are germane. Specifically, TMS cross-functional teams (CFT) will inform and support conventional, Title 10 reporting channels (i.e. Marine Aircraft Wing (MAW), ALD). Both the TMS Team and its conventional reporting channels will work in parallel, to reduce costs and remove readiness barriers by using established NAE organizations, processes, and tools as outlined in enclosure (1).

d. Coordinating Instructions

(1) All aviation commanders and operations, maintenance, and fiscal officers will familiarize themselves with this Order.

(2) All activities will continue to comply with the reporting requirements of references (b) and (j) until further notice.

4. Administration and Logistics

a. Forward recommended changes or corrections to this Order to Aviation Support, Logistics (ASL) via the appropriate chain of command.

b. Privacy Act. Any misuse or unauthorized disclosure of Personally Identifiable Information (PII) may result in both civil and criminal penalties. The DON recognizes that the privacy of an individual is a personal and fundamental right that shall be respected and protected. The DON's need to collect, use, maintain, or disseminate PII about individuals for purposes of discharging its statutory responsibilities will be balanced against the individuals' right to be protected against unwarranted invasion of privacy. All collection, use, maintenance, or dissemination of PII will be in accordance with the Privacy Act of 1974, as amended (reference (k)) and implemented per reference (l).

c. Records created as a result of this Order shall be managed according to National Archives and Records Administration approved dispositions per references (m) to ensure proper maintenance, use, accessibility and preservation, regardless of format or medium.

5. Command and Signal

a. Command. This Order is applicable to the Marine Corps Total Force.

b. Signal. This Order is effective the date signed.



S. R. RUDDER
Deputy Commandant for Aviation

DISTRIBUTION: 10203460500

LOCATOR SHEET

Subj: MARINE CORPS AVIATION CURRENT READINESS

Location: _____
(Indicate the location(s) of the copy(s) of the Order.)

RECORD OF CHANGES

Log completed change action as indicated

| Change Number | Date of Change | Date Entered | Signature of Person Incorporated Change |
|---------------|----------------|--------------|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

(This page intentionally left blank)

TABLE OF CONTENTS

| <u>IDENTIFICATION</u> | <u>TITLE</u> | <u>PAGE</u> |
|------------------------------|---|--------------------|
| CHAPTER 1 | Marine Corps Aviation Current Readiness Program..... | 1-1 |
| 1. | Mission..... | 1-1 |
| 2. | Goal..... | 1-1 |
| 3. | Situation..... | 1-2 |
| 4. | Vision..... | 1-3 |
| 5. | Basic Concepts, Terms, and Definitions..... | 1-3 |
| Figure 1.1 | Marine Aviation Objectives..... | 1-1 |
| Figure 1.2 | Naval Aviation Enterprise (NAE) Membership Structure.. | 1-5 |
| Figure 1.3 | Naval Aviation Enterprise (NAE) Relationships..... | 1-7 |
| Figure 1.4 | Briefing Event Leadership Level..... | 1-8 |
| Figure 1.5 | Flightline/RBA/RFT..... | 1-9 |
| Figure 1.6 | Earned Value Stop Light Rating..... | 1-11 |
| CHAPTER 2 | NAE Current Readiness Structure and Responsibilities.. | 2-1 |
| 1. | Introduction..... | 2-1 |
| 2. | Current Readiness Cross-Functional Team (CR CFT)..... | 2-1 |
| 3. | Current Readiness Executive Steering Committee CR ESC. | 2-4 |
| 4. | Marine Aviation Executive Readiness Board (MAERB).... | 2-5 |
| 5. | USMC Readiness Leadership Team (RLT)..... | 2-7 |
| 6. | The Readiness, Standards, and Policy Team (RS&P)..... | 2-10 |
| 7. | Fleet Analysis Support Team (FAST)..... | 2-12 |
| 8. | Metrics Configuration Control Board (MCCB) - USMC.... | 2-14 |
| 9. | The Engineering, Maintenance, & Supply Chain Management (EM&SCM) CFT..... | 2-15 |
| 10. | Type/Model/Series (TMS) Team..... | 2-18 |
| Figure 2.1 | Naval Aviation Enterprise (NAE) Current Readiness Structure..... | 2-2 |
| Figure 2.2 | United States Marine Corps (USMC) Integration into Naval Aviation Enterprise (NAE) Current Readiness.... | 2-3 |
| Figure 2.3 | MAERB in the Current Readiness Battle Rhythm..... | 2-7 |
| Figure 2.4 | Readiness Leadership Team in the CR CFT..... | 2-8 |
| Figure 2.5 | RLT in the Current Readiness Battle Rhythm..... | 2-9 |
| Figure 2.6 | Readiness Standards and Policy in the CR CFT..... | 2-10 |
| Figure 2.7 | Fleet Analysis Support Team in the CR CFT..... | 2-13 |
| Figure 2.8 | Metrics Configuration Control Board in the CR CFT.... | 2-14 |
| Figure 2.9 | EM&SCM in the CR CFT..... | 2-16 |
| Figure 2.10 | TMS Team Membership..... | 2-19 |
| Figure 2.11 | Battle Rhythm..... | 2-29 |
| CHAPTER 3 | Metrics and Analysis..... | 3-1 |
| 1. | Introduction..... | 3-1 |
| 2. | Key Performance Indicators (KPIs)..... | 3-1 |
| 3. | Marine Corps Current Readiness Metrics..... | 3-2 |

| | | |
|------------|--|------|
| 4. | Training (T-Rating) and Aircrew Core Competency (ACC) | 3-4 |
| 5. | Required Maintainer Competency (RMC) | 3-4 |
| 6. | Flight Line Aircraft Availability | 3-9 |
| 7 | Ready For Tasking (RFT) Aircraft Availability (Goal 75% of PMAA) | 3-9 |
| 8. | Aircraft Life Management (ALM) | 3-11 |
| 9. | Cost Performance | 3-12 |
| 10. | Aircraft Status Dashboard and Sustainment Metrics | 3-16 |
| 11. | Analysis | 3-19 |
| 12. | Monthly Analysis Summary Process | 3-20 |
| 13. | Changes | 3-24 |
| Figure 3.1 | Marine Corps' Top KPIs | 3-3 |
| Figure 3.2 | RMC Standards Change Timeline | 3-7 |
| Figure 3.3 | RBA Definitions | 3-11 |
| Figure 3.4 | Standards Definitions | 3-11 |
| Figure 3.5 | Aircraft Status Dashboard (ASD) | 3-16 |
| Figure 3.6 | Sustainment Trends | 3-17 |
| Figure 3.7 | Sustainment Metrics | 3-18 |
| Figure 3.8 | Monthly Analysis Summary: RFT | 3-21 |
| Figure 3.9 | Monthly Analysis Summary: Cost Performance | 3-24 |

CHAPTER 4 Marine Corps Current Readiness Briefing Requirements..4-1

| | | |
|------------|--|------|
| 1. | Introduction | 4-1 |
| 2. | Purpose | 4-1 |
| 3. | Communications | 4-1 |
| 4. | Current Readiness Action | 4-3 |
| 5. | Readiness Leadership Team (RLT) | 4-4 |
| 6. | TMS Readiness Workshop (TRW) | 4-5 |
| 7. | Marine Aviation Executive Readiness Board (MAERB) | 4-9 |
| 8. | Current Readiness Cross-Functional Team (CR CFT) Brief | 4-10 |
| 9. | Air Board Brief | 4-12 |
| 10. | Operations and Sustainment (O&S) Cost Deep Dive | 4-14 |
| 11. | Mid-Cycle Review | 4-15 |
| 12. | Actions Post Air Board Briefing Cycle | 4-16 |
| Figure 4.1 | Briefing Overview | 4-1 |
| Figure 4.2 | Briefing Cycle | 4-2 |
| Figure 4.3 | Naval Aviation Enterprise (NAE) Air Board Membership | 4-12 |

APPENDIX A Barriers to Success and Process Improvement.....A-1

| | | |
|------------|--|------|
| 1. | Barrier Identification and Removal Process | A-1 |
| 2. | Action Item Management | A-21 |
| 3. | Process Improvement Tools | A-27 |
| Figure A.1 | Simple Barrier Identification | A-1 |
| Figure A.2 | Types of Barriers to Performance | A-1 |
| Figure A.3 | Barriers to Performance | A-4 |
| Figure A.4 | BRT Work Package Team Charter | A-8 |

Figure A.5 Process Mapping Example.....A-9
Figure A.6 Barrier Identification.....A-11
Figure A.7 Fishbone/Ishikawa Diagram: Example.....A-13
Figure A.8 Barrier Prioritization Sheet.....A-13
Figure A.9 Barrier Ranking Charts.....A-14
Figure A.10 BRT Assignment Schedule and Action Item (AI) Tracker..A-15
Figure A.11 Simple Barrier Identification.....A-21
Figure A.12 Action Items Flow.....A-25
Figure A.13 Action Items Log Example.....A-26

APPENDIX B COST GAP ANALYSIS.....B-1

1. Naval Aviation Enterprise (NAE) Chief Financial Officer
and Board of Directors.....B-1
2. Cost Analysis Team Overview.....B-2
3. Guidance.....B-4
4. Cost Gap Analysis Reports.....B-5

Figure B.1 Cost Analysis Team.....B-3
Figure B.2 Cost Brief Process.....B-5
Figure B.3 TMS Cost Gap Analysis Chart.....B-6
Figure B.4 EI, CPI, Schedule Performance Index (SPI) Stop Light
Chart Values.....B-6
Figure B.5 TMS Cost Elements Chart.....B-7
Figure B.6 Schedule Performance Index Panel.....B-7
Figure B.7 Execution Index Panel.....B-8
Figure B.8 Cost Performance Index Panel.....B-9
Figure B.9 Example of SPI, CPI and EI Relationships.....B-9

APPENDIX C STANDARDS CHANGE FORM.....C-1

APPENDIX D METRICS CHANGE FORM.....D-1

ACRONYMS.....Acronyms-1

(This page intentionally left blank)

Chapter 1

Marine Corps Aviation Current Readiness Program

1. Mission. In collaboration with the Naval Aviation Enterprise (NAE), Marine Aviation commanders and leaders will plan, manage, and execute the Current Readiness (CR) process to maximize equipment and personnel readiness. Their focus must be on achieving the required levels of readiness to produce core competent aviation units (squadrons/detachments) for warfighting missions at the best possible cost. This goal can be met by optimizing resources (allocations and expenditures); minimizing logistical downtimes and delays; and sound leadership.

2. Goal. The goal of Marine Aviation is to attain and maintain aviation combat readiness to support expeditionary maneuver warfare, while simultaneously preserving and conserving Marines and equipment. Embedded within this combat readiness goal is the ability to plan for crisis and/or contingency operations, and the capacity to rapidly, effectively, and efficiently deploy on short notice.

a. The Deputy Commandant for Aviation (DCA) and the Marine Air Board expect USMC aviation leaders to achieve the Objectives listed in Figure 1.1 through a disciplined application of the CR process.



Marine Aviation Objectives

- **The Deputy Commandant for Aviation's responsibility to the Commandant and to the Marine Corps distills into a single word: READINESS**
- **Priorities**
 - Build Readiness for Combat
 - Modernize the Force
 - Support the Maintainer
 - Support the MAGTF

We have much work to do – but we remain on exactly the right track.

Figure 1.1. Marine Aviation Objectives

b. The most directly measurable output of the CR process is the production of warfighting capability, specifically, core competent units. A unit's core competency is assessed by its ability to execute approved, capabilities-based, Mission Essential Tasks (METs). Therefore, the design of CR is to adequately resource a unit to achieve MET-based readiness and resultant core competency. CR facilitates detailed unit readiness assessments in the Defense Readiness Reporting System - Marine Corps (DRRS-MC), which informs the Secretary of Defense, Joint Chiefs of Staff, Combatant Commanders, Military Services, Combat Support Agencies and other key Department of Defense users of the readiness of the armed forces to accomplish core and assigned missions.

3. Situation

a. Background. The Marine Corps' participation in the NAE has allowed Marine Aviation to closely monitor and, where appropriate, impact readiness. Vigilance is required to identify further opportunities and take actions to sustain and improve the reliability and effectiveness of our weapons platforms. Through continued emphasis "to mitigate costs and find efficiencies," the NAE and CR are taking on increased importance every day.

b. The Warfighting Focus. The sole focus of the NAE and the CR process is to provide the best possible warfighting force to meet Navy and Marine Corps requirements. CR facilitates detailed coordination between all aviation stakeholders so they may measure performance, identify barriers, and systematically improve unit core competency by eliminating readiness gaps. These actions will allow Marine Aircraft Group (MAG) commanders to employ the necessary number of core competent units in sustainable flight operations to meet T-Rating, Required Maintainer Competency (RMC) goals, and Ready Basic Aircraft (RBA)/Ready for Tasking (RFT) goals at the best possible cost.

c. Understanding the Current Readiness Environment. Commanders must understand and counter the 'pressures' which degrade readiness. Examples are:

(1) Aircraft Age. Understand the nuances and challenges associated with supporting "sun-downing," legacy, and transitioning platforms.

(2) People. As Marine Aviation manpower continues to evolve, anticipate changes to personnel inventories and skill-set capacities which may negatively impact a unit's ability to deploy or maintain readiness. For example: does a lack of experience in a highly technical skill set necessitate an increase in maintenance training or contractor support? How would that affect organic support in deployment scenarios? What is the most cost-effective solution to meet the readiness requirement?

(3) Operational Tempo. A higher than planned deployment rate (e.g. crisis response units) may exceed the capacity of the system to sustain Continental United States (CONUS)-based units. In extreme cases, Operational Tempo may prevent a platform from meeting sun-down expectations (i.e. Aircraft Life Management (ALM)) or place unforeseen stress on an immature supply support system.

(4) Logistics Elements. What is normally identified as an insufficient number of spare parts may, in fact, be a break-down of Product Support Elements (PSE) such as technical publications, training, tools, engineering support, etc. A breakdown or failure of any PSE will first present itself as a supply deficiency, which if not correctly identified and solved will not remove the root cause of the true logistics failure.

(5) Funding. The Marine Corps Flight Hour Program (FHP) has been optimized to meet Training and Readiness (T&R) levels (i.e. core competency requirements). While there is still no excess to support training outside the T&R, significant commitments have been made to incrementally increase funding for all readiness accounts, including Program Related Logistics (PRL) and Program Related Engineering (PRE), over successive budget cycles.

4. Vision. Commanders shall attain a solid understanding of the CR construct in order to lead, educate, and mentor leaders throughout aviation. Additionally, they shall leverage CR to its maximum benefit and be able to effectively communicate operational readiness requirements and status using the NAE taxonomy. They should instill a culture of Continuous Process Improvement (CPI) at all levels within the organization. CR shall not be treated as a collateral duty. Properly executed, the CR process will enhance warfighting capability by enabling reliable, sustainable sortie rates through a deliberate alignment between Supply (Maintenance and Logistics) and Demand (Operations).

5. Basic Concepts, Terms, and Definitions. The following paragraphs provide an overview of key concepts and definitions associated with the CR process. The following discussion is not all inclusive, but will provide a basic understanding of NAE CR.

a. Administration

(1) United States Marine Corps (USMC) Alignment with the Naval Aviation Enterprise (NAE) Handbook. To facilitate reference and comparison, this document is closely aligned to the NAE "Current Readiness Cross-Functional Team (CR CFT) Handbook" that is available on the NAE SharePoint site.

(2) Management and Change Submission Policy. Headquarters Marine Corps (HQMC) ASL-20 actively manages this guidebook with contributions from NAE CR, HQMC Aviation Staff, and USMC TMS Teams, advisors, and analyst. ASL-20 will maintain a master list of approved

changes and notify users when significant revisions have been made and publish instructions for incorporation.

b. Naval Aviation Enterprise (NAE) Structure (See Figure 1.2.). The NAE is governed by the Air Board; a forum of Flag/General Officers and Senior Executive Service leaders representing all the commands which impact execution of Naval Aviation processes on a day-to-day basis. They oversee four Cross-Functional Teams (CFTs): Current Readiness (CR), Future Readiness (FR), Total Force (TF), and the Integrated Resource Management Team. The IRMT and Total Force Cross-Functional Team (TF CFTs) support the other CFTs by managing fiscal and Navy manpower issues between the NAE and critical resource sponsors. Within the Air Board, there is an Air Board Executive Committee (EXCOMM) consisting of the senior leadership which directs Naval Aviation. It is a decision-based leadership quorum with a rapid cycle-time. The EXCOMM also includes the leaders of each CFT and the leaders of the major providers.

c. Naval Aviation Enterprise (NAE) Governance. Overarching NAE governance is directed by Commander, Naval Air Forces (CNAF) and the Deputy Commandant for Aviation (DCA) as the NAE process owners for their services. Commander, Naval Air Systems Command (NAVAIR) serves as the primary provider to the NAE. That governance is executed by the EXCOMM and implemented across the stakeholders within the Air Board. As a partnership of Title 10 organizations, the NAE proactively utilizes embedded authorities and teaming relationships to work cooperatively to properly align efforts to achieve required levels of readiness. The goal is an integrated approach to maximize both readiness and efficiencies. In other words, governance is the process through which the enterprise makes strategic decisions, determines who is involved in the decisions, and demonstrates accountability for results of the actions. For Marine Aviation CR, governance is promulgated through the MAERB.

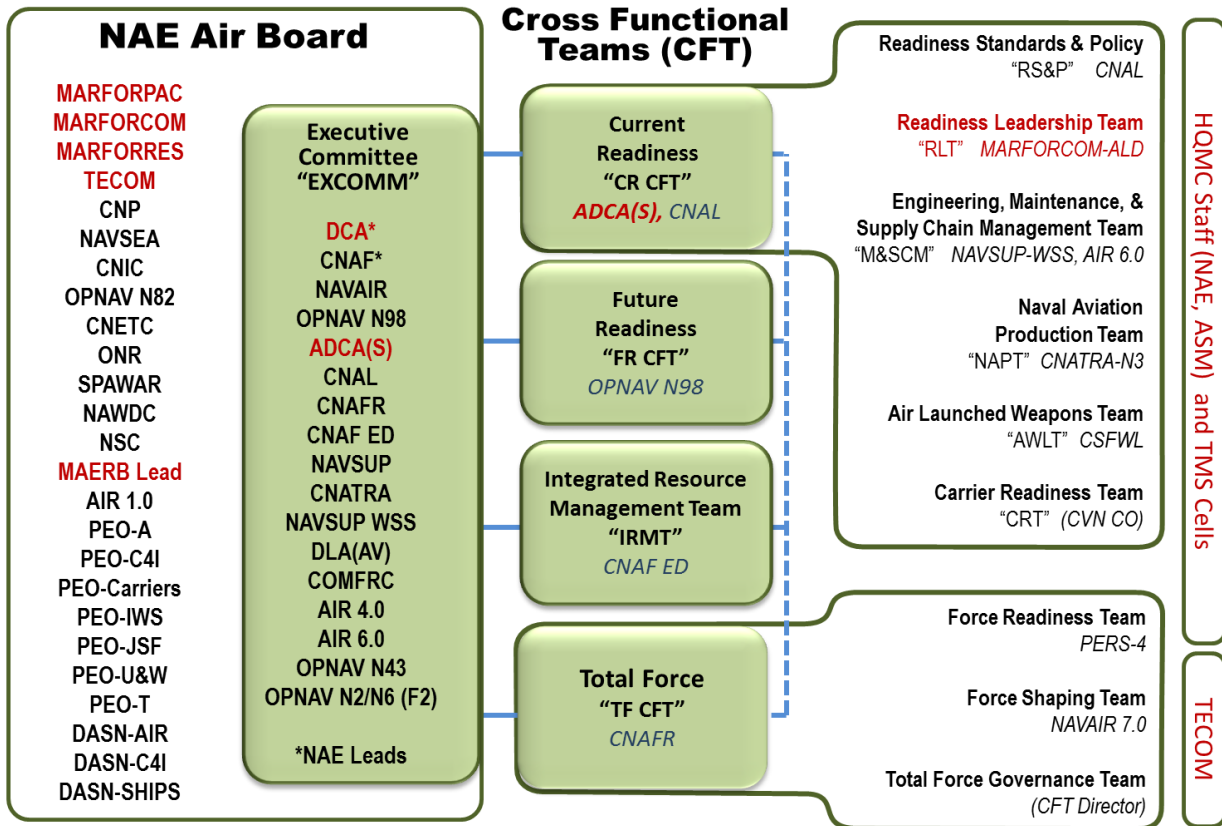


Figure 1.2. Naval Aviation Enterprise (NAE) Membership Structure

d. Naval Aviation Enterprise (NAE) Current Readiness (CR). The CR CFT supports Naval Aviation and the NAE by applying enterprise principles to improve the delivery of combat ready forces to meet current and future operational requirements at the best possible Operations and Support cost. The CR CFT is responsible for aligning and managing the key processes supporting manning, equipment, and training readiness levels which are necessary to generate Core Competent Units (USMC) or Units Ready for Tasking (USN). The CR CFT is primarily focused on the Naval Aviation business processes in which readiness and readiness resource requirements are determined, prioritized, managed, and coordinated. Additionally, it is focused on readiness program execution. The CR CFT impacts these processes by linking decision-makers horizontally at the deckplate, staff, and command levels so that problems can be resolved cross-functionally, resulting in the achievement of readiness requirements in a more efficient manner. The processes implemented by the CR CFT seek to attain and sustain near and long term Naval Aviation readiness goals by applying enterprise principles to sustain and advance Naval Aviation warfighting capabilities at the best possible cost. These enterprise principles include:

- (1) Concentrate efforts on producing required readiness while sustaining fleet wholeness and improving efficiency

- (2) Exercise a bias for action.
- (3) Drive systemically cross-functional, cross-command practices.
- (4) Apply disciplined, process-driven, analytic methodologies.
- (5) Understand the single fleet driven metric: Naval Aviation forces ready for tasking, in the numbers required, to meet Navy and Marine Corps readiness and warfighting requirements.
- (6) Use consistent, integrated, and hierarchical metrics that are focused on Fleet readiness and sustainment.
- (7) Ensure full and consistent transparency of data, information, and activities.
- (8) Establish and maintain accountability for actions and results.
- (9) Commit to active participation.

e. The Team Approach and Type/Model/Series (TMS) Teams. The NAE is comprised of both functional and cross-functional teams which work together for the primary purpose of addressing the complex issues that impact current readiness. For instance, NAE functional teams analyze areas such as pilot and naval flight officer (NFO) training, enlisted aircrew training, maintenance personnel training, budgeting, cost management, supply, and maintenance. Using representatives from a variety of disciplines, CFTs use collaboration to ensure and enhance information flow across all functional stovepipes. This makes the cross-functional TMS Team the most significant team within the NAE.

(1) TMS Teams identify and address platform specific readiness shortfalls by analyzing and acting on critical gaps (e.g. personnel, cost, equipment, etc). Membership and associated responsibilities of the TMS teams are discussed in Chapter 2. The TMS Team is THE conduit to pass readiness issues to the Deputy Commandant for Aviation (DCA) and the NAE three-star executive board (Air Board). Briefings to leadership use standardized cockpit charts (CpCs) which are derived from validated NAE metrics.

(2) TMS Team Leads (i.e. Commanding Officers of select MAGs) are assigned by the DCA and are directly responsible to the DCA for all readiness matters affecting their platform.

f. Current Readiness Operations. TMS Teams support NAE "process discipline" by using a 12-month briefing cycle to raise readiness issues to aviation leadership. The active portion of the cycle is published through the NAE Master Schedule from TRW to O&S Cost Deep Dive. During this four month period, teams vet issues and refine presentations so they can clearly articulate the platform's most

important readiness issues to leadership. Significantly, the purpose of these meetings is not to simply report readiness, but to identify ways and means to enhance it and, when appropriate, request leadership assistance.

During the "inactive" period of the briefing cycle, the TMS team continues to coordinate with the rest of their cross-functional team, through regularly scheduled (no less than bi-weekly) TMS Team meetings, to achieve any goals or tasks established by the Air Board to further advance TMS Readiness. Additionally, the TMS Team provides an update to the Air Board, a Mid-Cycle Review, six months after the TMS Air Board.

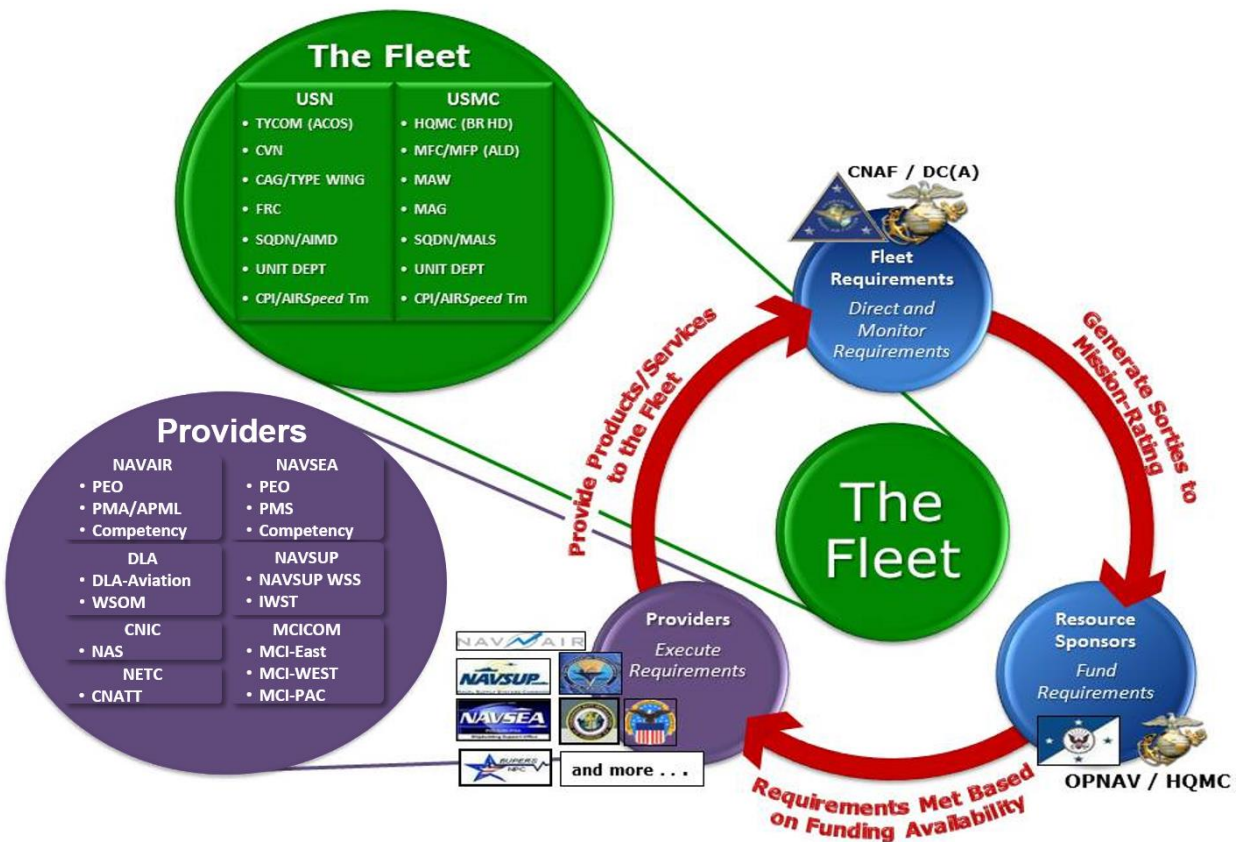


Figure 1.3. Naval Aviation Enterprise (NAE) Relationships

Current Readiness Briefing Cycle

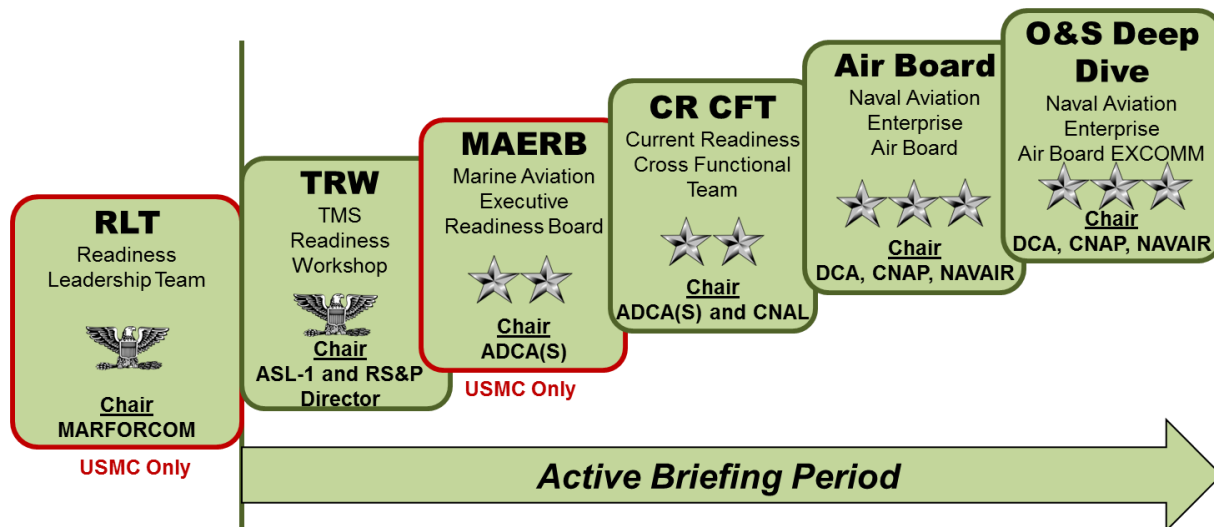


Figure 1.4. Briefing Event Leadership Level

NOTE: The MAERB and Readiness Leadership Team (RLT) are Marine-only venues, though Navy stakeholders/providers/enablers germane to the issues will be invited on a case-by-case basis. The cycle is depicted in Figure 1.4.

g. Core Competency. Core competency, the ultimate goal, is the ability of a unit to perform its prescribed mission essential tasks. This ability is greatly and directly affected by variances in personnel, equipment, and internal/external processes to include maintenance capability and capacity and cost per hour funding. NAVMC 3500.14C Glossary of Terms further defines Core Competency as a collective term that entails requirements, capabilities, and information delineated in the applicable unit mission statement, Mission Essential Task List (METL), appropriate Table of Organization information, Output Standards, Core Model Minimum Requirements (CMMR), and supporting tables such as METL/Core Skill matrix and qualification/designation tables. Maintenance training standards and aircraft standards captured in the CR process complete the definition.

h. Standards. CR Standards for aircrew, aircraft, and maintainers are included in "Standard Tables" developed by individual TMS team subject matter experts (SMEs). These standards are approved by HQMC based upon TMS Lead/Team recommendations and serve as a measure of readiness and the baseline for all CR reporting. TMS Standards support the definition of a Core Competent Unit and help to define the performance goals TMS teams seek to achieve. All CpCs in the CR system are based on data measured against the standard.

i. Ready Basic Aircraft (RBA), Ready for Tasking (RFT), and Flight Line Availability. Along with cost, RBA, RFT, and Flight Line Availability are central to the understanding of the CR process. Aircraft availability is a CR Key Performance Indicator (KPI). Availability of properly configured aircraft with specific aircraft systems is an essential contributor to the accomplishment of a unit's Sortie Based Training Plan (SBTP) and combat operations. It is important to understand the relationships between RBA, mission systems (MS), and how they apply to the RFT calculation. Additional information may be found in Chapter 3.

(1) Ready Basic Aircraft. RBA is the term used to describe a mission capable (MC) aircraft that is functional check flight (FCF) complete, capable of day or night instrument flight in accordance with Naval Aviation Training and Operating Procedures Standardization (NATOPS) and Federal Aviation Administration (FAA) regulations. The RBA requirement is 75% of the Flight Line Requirement. The Flight Line requirement is equal to the number of Primary Mission Authorized Aircraft (PMAA), a requirement term referring to the number of aircraft authorized to a unit for performance of its mission. At times HQMC may authorize, for a temporary period, an aircraft inventory less than the PMAA. For TMS Teams undergoing a transition, an adjudicated alternative Primary Mission Authorized Inventory (PMAI) based on TMS specific transition strategy is required. The alternative PMAI (also referred to as depreciated PMAI or flight line entitlement (FLE)) is normally negotiated between the applicable HQMC Aviation TMS Cell Lead and the TMS Team Lead and approved by Deputy Commandant for Aviation (DC(A)). The adjusted TMS PMAA is used to calculate the CR requirement for the TMS Team in transition.

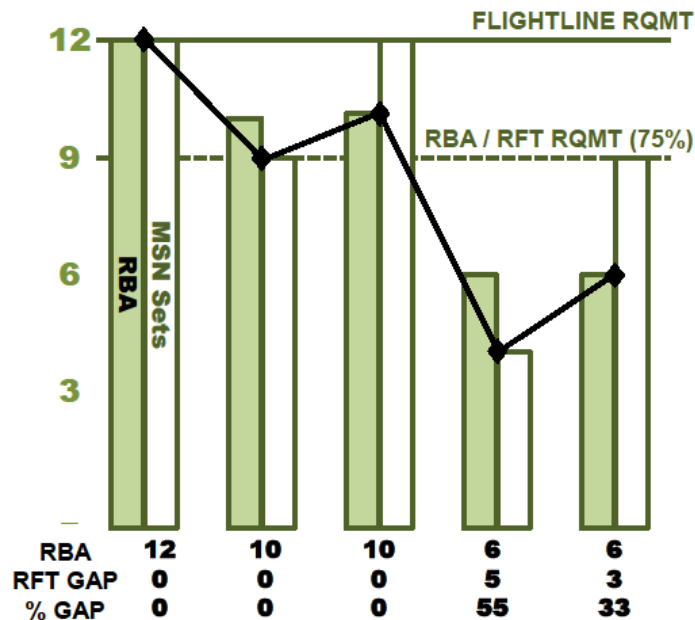


Figure 1.5. Flightline/Ready Basic Aircraft (RBA)/Ready For Tasking (RFT)

(2) Ready for Tasking Sets. An RFT set pairs RBA availability with the necessary MS to enable aircrew to meet T&R Manual requirements. Calculations for RFT are done at the squadron level and indicate the average number of RFT sets available during the month. RFT involves deficit math. The greatest deficit in either RBA or MS is subtracted from the unit's RFT/RBA standard to form RFT availability as depicted in Figure 1.5.

j. Cost Performance. Along with RBA/RFT, Cost Performance is central to the understanding of the CR process. Cost Performance is one of the CR KPIs. The NAE provides toolsets to assist teams in analyzing the full-spectrum cost of every TMS. TMS teams are expected to use their Title 10 chain of command, Cost Analysis Team (CAT) (Section 3.9.4 / Pg 3-12 and Appendix B) and the CFT construct to actively manage their platform's cost elements and discuss trends at all NAE venues. Total familiarity of a few key metrics is essential to understand and analyze cost performance. The first, Earned Value (EV), is used to compute other key metrics. EV is the "Should Cost" metric; it is the OP-20 budgeted cost per hour multiplied by the number of executed flight hours. The other key metrics are briefly described in Figure 1.6 below. Individual TMS cost metric goals are closely aligned to those in the figure, but may deviate slightly to reflect nuances within the TMS. Additional information: Chapter 3 and Appendix B.

Note: A review of the value of using RBA/RFT versus MC/FMC as the key determinant of readiness is on-going. RBA/RFT is currently being used internal to the Navy and Marine Corps to discuss readiness, and MC/FMC is being used externally for funding discussions.

k. Continuous Process Improvement (CPI). Naval Aviation's continuous process improvement (CPI) methodology blends the best business practices of Theory of Constraints (TOC), Lean Manufacturing, and Six Sigma. The Naval Aviation Maintenance Program (NAM) (COMNAVAIRFORINST 4790.2) outlines unit requirements relating to Continuous Process Improvement (CPI). When correctly applied at the organizational, intermediate, and industrial levels, Continuous Process Improvement (CPI) aligns the enterprise to warfighter requirements while providing best value and continually improving the supporting processes throughout. Continuous Process Improvement (CPI) enables Naval Aviation to put these concepts into practice and has positively impacted the quality of service and quality of life for Marines, Sailors, and civilians. Commitment to Continuous Process Improvement (CPI) enhances the Marine Corps' ability to produce core competent units. The NAE regularly conducts "Boots on the Ground/Boots on the Deck" (BoG/BoD) events where three-star NAE leadership tour units to review Continuous Process Improvement (CPI) efforts and make informed decisions necessary to assist in barrier removal and process improvement efforts.

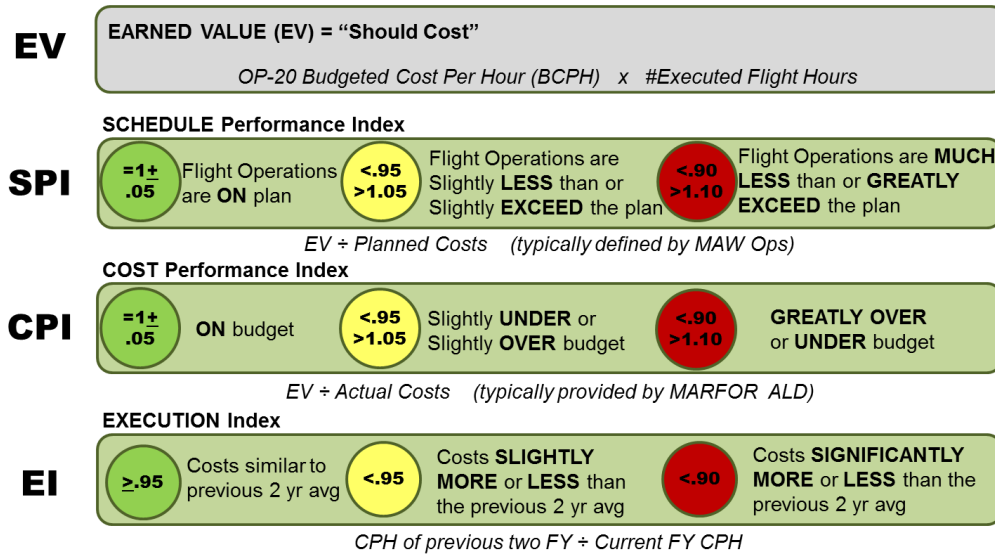


Figure 1.6. Earned Value Stop Light Rating

(This page intentionally left blank)

Chapter 2

Naval Aviation Enterprise (NAE) Current Readiness Structure and Responsibilities

1. Introduction. Marine Corps Aviation CR is a process to measure and compare readiness levels to requirement goals and to drive improvements within NAE channels. NAE components serve as the means to facilitate collaboration, transparency, information sharing, and process improvement across the Naval Aviation stakeholder communities. The CR process enables TMS Teams to link decision-makers horizontally from the deckplate through command levels so problems can be solved cross-functionally to address readiness barriers in a more efficient manner. Every aviation leader must think strategically, beyond command boundaries, work collaboratively across organizations, understand the risks inherent in our decisions, and be open to new approaches and innovative solutions.

2. Current Readiness Cross-Functional Team (CR CFT)

a. Introduction. In the pursuit of current readiness, an effort to drive actions to deliver combat-ready forces to meet current training and operational requirements, the CR CFT facilitates collaboration between the major staff/command staffs and the other cross-functional teams: the FR CFT, the IRMT CFT, and the TF CFT. These linkages provide vital information conduits between aviation communities, single-service teams, the enterprise's staff/command-level teams, and the deckplate. As depicted in Figure 2.1, teams within the CR structure are generally classified as Governance, Supporting, and Reporting. Note the non-hierarchical nature of teams within the CR CFT.

(1) General Officer/Flag Officer (GO/FO) Level (Commanders and Staff). CR, FR, Engineering, Maintenance, & Supply Chain Management (EM&SCM), TF, and IRMT work together to help solidify partnerships at the command and staff levels which support TMS Teams by helping them resolve force-wide issues.

(2) O-6 Level. The TMS Teams, the Air Launched Weapons Team (ALWT), and the Naval Aviation Production Team form the vital linkage between the deckplate and the GO/FO command and staff level. Their partnerships at the O-6 level with fleet operators and aviation providers are the DNA of the enterprise.

(3) The Deckplate. AIRSpeed and Boots on Ground/Boots on Deck (BoG/BoD) events provide a tool-set and a forum for ALL stakeholders to address and resolve issues from the deckplate to the senior leadership.

b. Current Readiness Cross-Functional Team (CR CFT) Focus (The Pursuit of Readiness). The CR CFT focuses on the processes needed to sustain aviation readiness. The NAE publishes Strategic Objectives

(SO) and supporting implementation actions. The CR CFT pursues these goals. It uses implementation actions to accomplish the NAE SO. These implementation actions enable the CR CFT and its teams to influence maintenance work flow, parts replenishment, and system acquisition. Additionally, these actions enable the CR CFT to monitor training, manpower, and cost management to provide required readiness at the best possible cost. CR CFT leadership provides governance over a set of standard metrics and uses recurring reviews to monitor the progress of its teams.

Current Readiness Structure

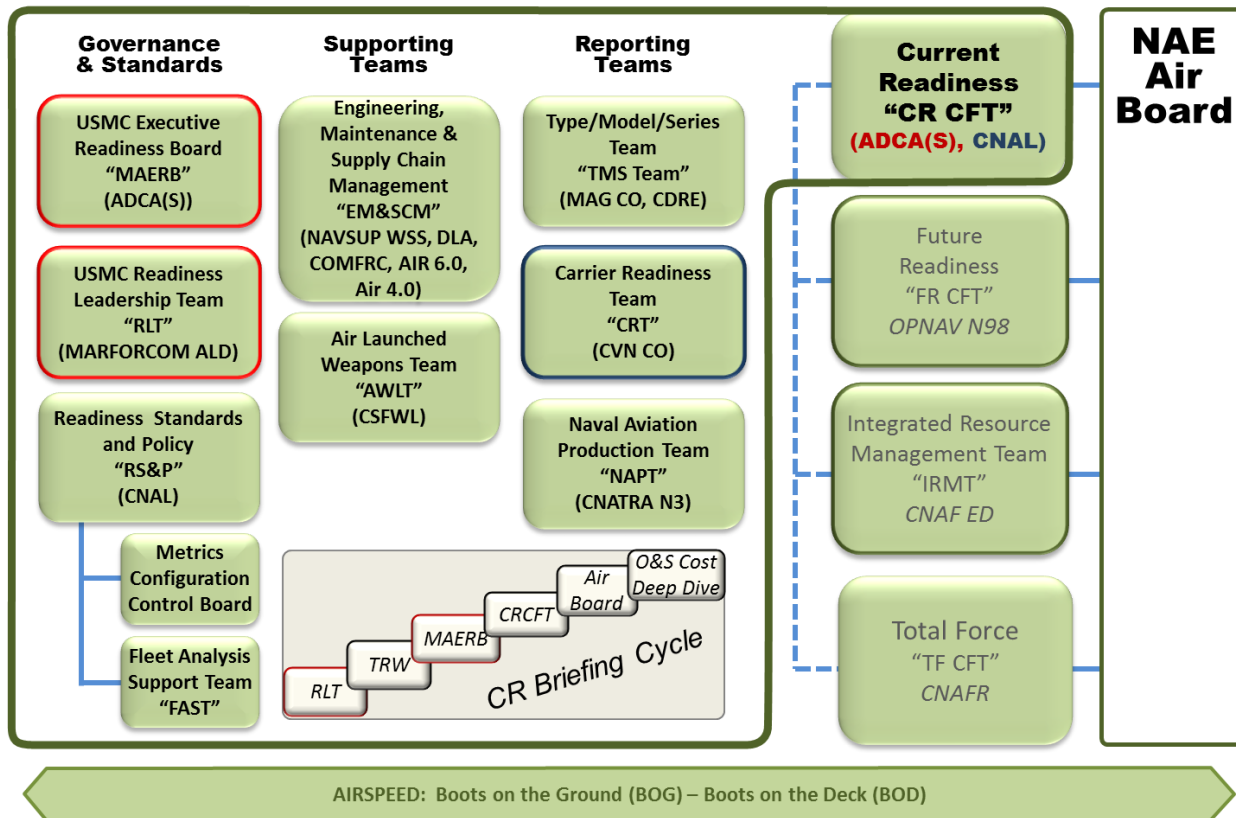


Figure 2.1. Naval Aviation Enterprise (NAE) Current Readiness Structure

c. Current Readiness Cross-Functional Team (CR CFT) Leadership and Responsibilities

(1) General Officer/Flag Officer Leadership. Overall responsibility for the CR CFT lies with the Assistant Deputy Commandant for Aviation (Sustainment) (ADCA(S)) and the Commander, Naval Air Forces, Atlantic (CNAL). Additionally, the team leads are augmented by Commander, Naval Supply Systems Command, Weapons System Support (NAVSUP(WSS)); Deputy Commander for Logistics and Industrial Operations, Naval Air Systems Command (NAVAIR AIR 6.0 and EM&SCM Co-Lead); and Assistant Commander, Navy Personnel Command for Career

Management (Bureau of Naval Personnel PERS-4 and Total Force - Force Readiness Lead for Navy). Their responsibilities include but are not limited to:

- (a) Manage CR CFT activity to accomplish NAE SO.
- (b) Co-Chair the CR CFT Video Teleconferences (VTC).
- (c) Resolve or escalate TMS readiness barriers to the NAE Air Board.
- (d) Coordinate CR CFT initiatives and efforts with other warfare enterprises.
- (e) Represent the CR CFT at the NAE Air Board EXCOMM and Air Board events.

USMC Integration into NAE & CR

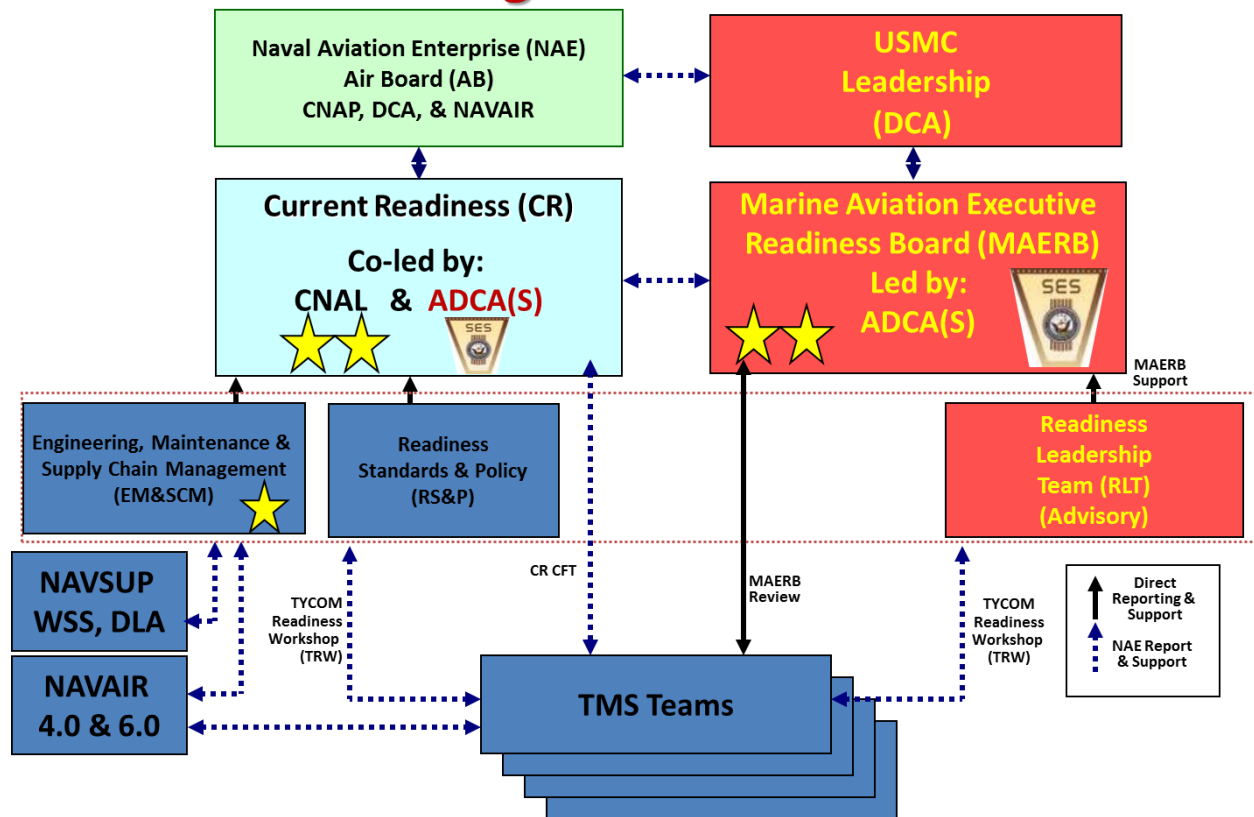


Figure 2.2. United States Marine Corps (USMC) Integration into Naval Aviation Enterprise (NAE) Current Readiness

(2) Current Readiness Cross-Functional Team (CR CFT) Directors. The Navy and Marine Corps each have directors who maintain the day-to-day operations of the CR CFT and act as the direct advisors to the CR CFT Co-Leads. The Marine Corps Co-Directors are HQMC-AVN ASL-1 and

Aviation Plans and Programs (APP)-1. The Navy's Director is CNAL N008. Their responsibilities include but are not limited to:

- (a) Provide counsel and guidance to CR CFT GO/FO Leadership.
- (b) Be prepared to represent CR CFT GO/FO Leadership.
- (c) Establish overall goals, objectives, priorities, and operational plans for execution of cost-wise readiness initiatives.
- (d) Collaborate across various constituencies to identify local and systemic barriers to meeting required readiness expectations.
- (e) Direct analyses efforts related to organizational effectiveness and efficiency for the required readiness at the best price.
- (f) Ensure implementation of policy, procedures, and program modifications throughout the NAE.
- (g) Develop and manage a communication strategy for the CR CFT (e.g. participate in the NAE Communications CFT to develop the Strategic Vision document, Naval Aviation Vision Book, NAE Air Plan, etc.)

d. Expected Impact. Readiness will be achieved as the CR CFT successes are sustained and as the fundamental underlying processes are optimized and linked with other NAE processes related to manpower, training, and cost.

3. Current Readiness Executive Steering Committee (CR ESC)

a. Mission. The CR ESC will provide an O-6/GS-15 level forum of CR Stakeholders from across the NAE in which to address issues and problems intersecting CFT boundaries. ASL-1 and APP-1 are the CR ESC directors who represent USMC interests. The CR ESC will seek to arrive at balanced and informed recommendations to present to NAE Leadership.

b. Charter. To support the Mission, the CR ESC is tasked to provide the following:

(1) Provide an O-6/GS-15 level forum for the review of CR-related NAE issues and provide recommendations to NAE Flag/General Officer Leadership.

(2) Review barriers escalated by local or TMS Teams, group them into systemic issues, and resolve or escalate to leadership.

(3) Review potential or proposed Action Items (AIs) arising out of TYCOM Readiness Workshops (TRWs) or CR CFT VTCs and make

recommendations as to whether to add them to the appropriate list or to delete them.

(4) Review components of the Strategic Plan SO, Strategic Initiatives, Focus Areas, and Implementation Actions) and ensure implementation actions are coordinated/accomplished across CFTs.

(5) Formulate recommended courses of action for NAE leadership through a decision-making model to the greatest extent possible. If a consensus cannot be reached between all members of the ESC, then a consensus between the stakeholders most affected by the issue will be sought. If a consensus still cannot be reached between the key stakeholders, then the USN and USMC leads will either decide on a course of action or elevate the issue to senior leadership for resolution.

c. Membership. The CR ESC is comprised of O-6/GS-15 leaders from the following organizations:

- (1) CR CFT Directors: USN/CNAL N008, USMC/ASL-1 & APP-1.
- (2) EM&SCM Team.
- (3) Carrier Readiness Team (CRT).
- (4) TF CFT.
- (5) ALWT.
- (6) FR CFT.
- (7) IRMT.

d. United States Marine Corps (USMC) and Units Ready for Tasking (USN) Director Responsibilities. The CR CFT Directors (USN and USMC) serve as co-chairs of the CR ESC. Their responsibilities will include:

- (1) Schedule meetings (face-to-face, teleconference) and notify ESC members.
- (2) Disseminate AIs and other topics for review and poll ESC members for opinions or preferences.
- (3) Facilitate communication with other CR CFT Stakeholders.
- (4) Discuss ESC topics at weekly CR CFT Action Officer (CR AO) calls as appropriate.

4. Marine Aviation Executive Readiness Board (MAERB). The MAERB is the main point of Marine integration to the NAE. It is a General Officer & Senior Executive steering group established to govern Marine

Corps Aviation readiness. The MAERB lead, ADCA(S), will co-lead the CR CFT with his Navy counterpart, CNAL. The MAERB will also provide an improved approach to the management of integrated readiness for the Marine Corps by linking opportunities and focusing improvement initiatives to overall mission readiness requirements. The integration is depicted in Figure 2.2.

a. Marine Aviation Executive Readiness Board (MAERB) Organization

(1) Permanent Core

(a) Assistant Deputy Commandant for Aviation (Sustainment) (ADCA(S)).

1. MAERB Lead.

2. NAE CR CFT Co-Lead.

(b) Deputy Commander, U.S. Marine Corps Forces Command.

(c) Deputy Commander, U.S. Marine Corps Forces, Pacific.

(d) Deputy Commander, U.S. Marine Corps Forces, Reserve.

(e) Commanding Generals, MAWs (1st, 2nd, 3rd, 4th).

(f) Director of Operations Division, Plans, Policies, and Operations, HQMC.

(2) Associate Members - Assistant Deputy Commandants.

b. Marine Aviation Executive Readiness Board (MAERB) Execution

(1) Marine Aviation Executive Readiness Board (MAERB) Overview. The MAERB Lead assists in establishing policy for Marine Aviation's integration into the CR process in coordination with Deputy Commandant for Aviation. The MARFORs and Wings provide General Officer representation to the MAERB. The MAERB governs development of Marine Corps Aviation readiness goals and metrics, assesses and shapes performance, directs integration and leveraging of NAE institutional mechanisms and resources, and provides continuous service-level direction and oversight of readiness associated resource issues and solutions (to include manpower, facilities, acquisition, training, material readiness, and integrated logistics support).

(2) Marine Aviation Executive Readiness Board (MAERB) Schedule. The MAERB meets as required, and is driven by the NAE briefing cycle (aligned to the NAE Master Schedule). Changes to the schedule are directed by the MAERB Lead.

(3) Responsibilities. The MAERB is responsible for the following actions, in addition to others presented by the MAERB Lead:

(a) Resolve governance issues and provide direction to MAG-led TMS Teams.

(b) Provide recommendations to Deputy Commandant, Aviation for actions or decisions by Marine Corps or NAE leadership

(c) Receive and provide approval for TMS briefs

(d) Review, discuss, and approve metrics and standards

(e) Participate in VTCs per the NAE Master Schedule

(f) Review Marine Corps Community of Interest issues (e.g. Reset, MILCON, Ranges and Targets, etc.) and provide comments and recommendations to DC(A)

(g) Receive Marine Aviation Readiness summaries

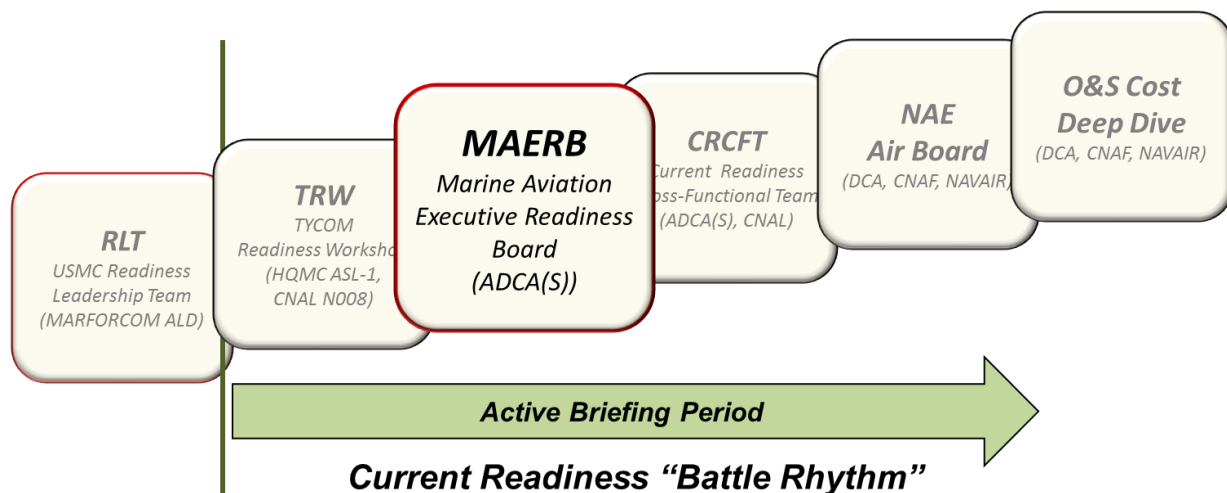


Figure 2.3. Marine Aviation Executive Readiness Board (MAERB) in the Current Readiness Battle Rhythm

5. United States Marine Corps (USMC) Readiness Leadership Team (RLT). The RLT is the Marine-only O-6 advisory group to the MAERB and supports the TMS Teams' integration into NAE CFTs. The RLT is led by the Director, Marine Forces Command (MARFORCOM) ALD. Figure 2.4 depicts RLT relationships with the Readiness Standards and Policy (RS&P) Team and their respective subordinate metrics control/analytics support mechanisms.

a. Mission. The RLT is the primary integrator for the implementation of Marine Aviation's CR Program and serves as a task functioning advisory body for the MAERB, TMS Teams, and where

appropriate to address specific Wing and MARFOR Commanding General's readiness interests. Members of the RLT shall:

- (1) Provide support and advice to MAG-led TMS Teams.
- (2) Assess Marine Aviation readiness posture and address readiness issues.
- (3) Coordinate with the RS&P and EM&SCM teams, as required.
- (4) Coordinate the scheduling of and lead the USMC Metrics Configuration Control Board (MCCB).
- (5) Manage Marine Aviation CR inputs to the NAE Master Schedule.
- (6) Conduct oversight of AI execution.
- (7) Support the Marine Aviation CR effort.
- (8) Serve as conduit for information and staffing of information on key NAE decisions affecting the USMC.
- (9) Attend NAE venues and ensure appropriate staff to include ALD G-3 and G-8/Comptroller are in attendance.

Readiness Leadership Team (RLT) in the CR CFT

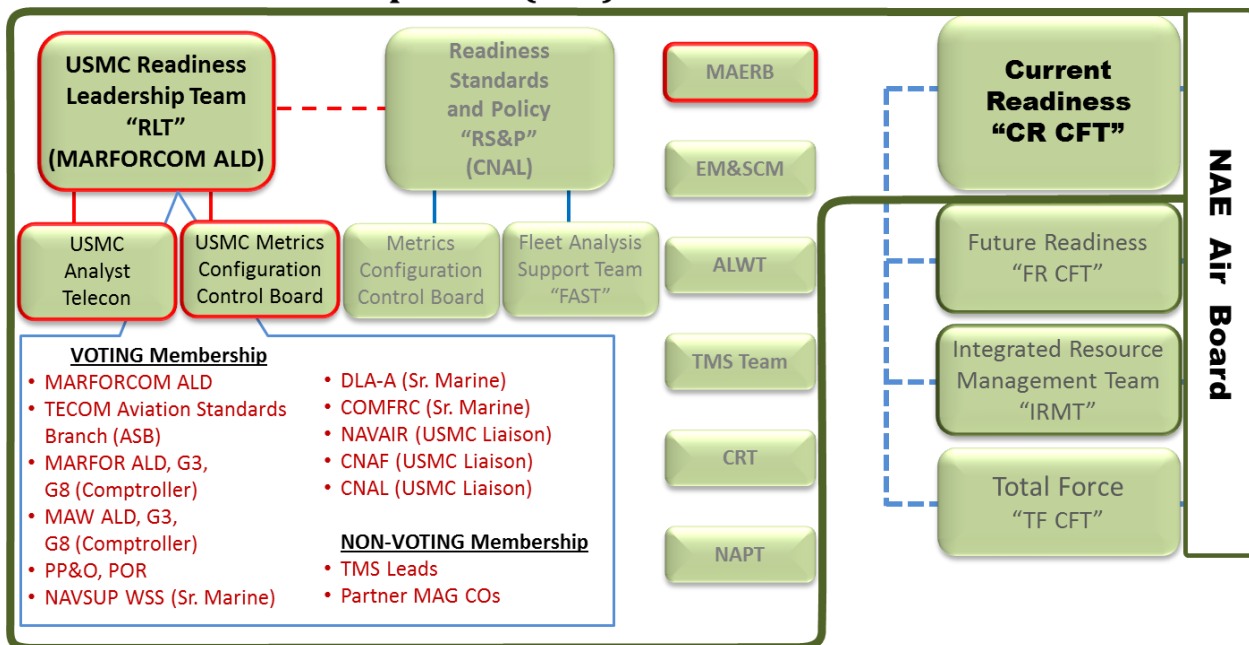


Figure 2.4. Readiness Leadership Team in the CR CFT

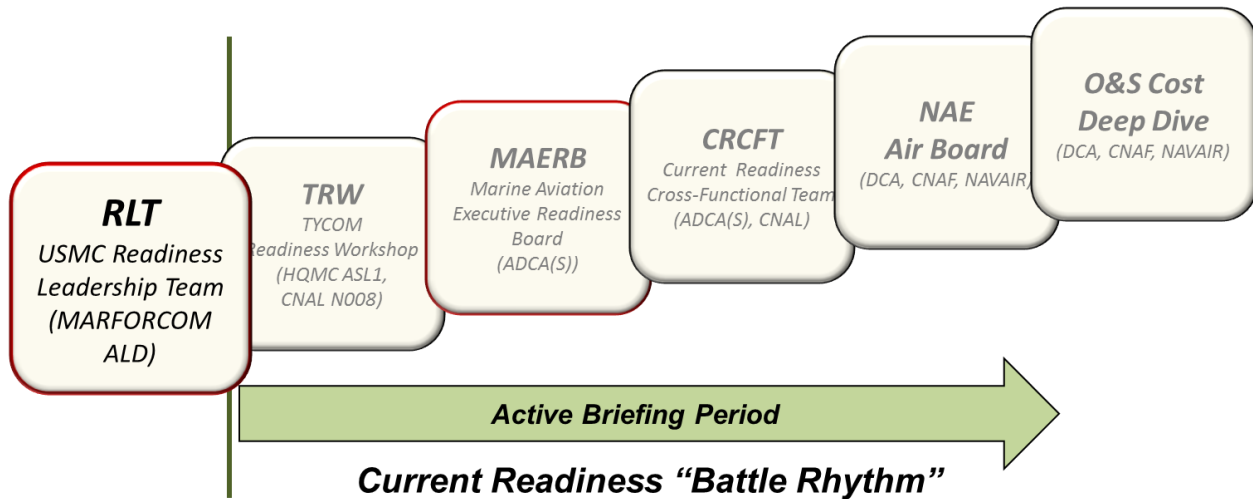


Figure 2.5. Readiness Leadership Training (RLT) in the Current Readiness Battle Rhythm

b. Organization. The RLT is composed of two groups:

(1) Voting Members

- (a) MARFORCOM - Director, ALD (Lead).
- (b) HQMC, Aviation Logistics Support (ASL) - ASL-1.
- (c) HQMC, Aviation Plans and Policies (APP) - APP-1.
- (d) Head, Training and Education Command, Aviation Standards Branch (TECOM(ASB)).
- (e) Readiness Branch Head (DC PP&O, POR).
- (f) Marine Forces ALDs, G-3s, and G-8s (Comptrollers).
- (g) MAWs, ALDs, G-3s, and G-8s (Comptrollers).
- (h) Naval Supply Systems Command (Weapons Systems Support) (NAVSUP WSS), Senior Marine.
- (i) Defense Logistics Agency, Aviation (DLA(A)), Senior Marine.
- (j) Commander, Fleet Readiness Center (COMFRC), Senior Marine.
- (k) Commander, Naval Air Systems Command (COMNAVAIRSYSCOM), Marine Liaison.

(l) Commander, Naval Air Forces, Pacific (CNAP), Marine Liaison.

(m) Commander, Naval Air Forces, Atlantic (CNAL), Marine Liaison.

(2) Non-voting Members. TMS Leads and Commanding Officers of partner MAGs.

c. Execution

(1) Battle rhythm. The RLT meets monthly with the agenda directed by the RLT Lead.

(2) Decision Making. Decisions, directions, and recommendations are made by RLT consensus.

6. The Readiness, Standards, and Policy Team (RS&P).

a. Overview. The Readiness, Standards, and Policy Team serves as the support and advisory organization to the CR CFT. It seeks to develop and maintain relevant CR CFT metrics and manage the efforts of and provide programmatic support and guidance to the TMS teams to achieve the goals of the NAE and the CR CFT.

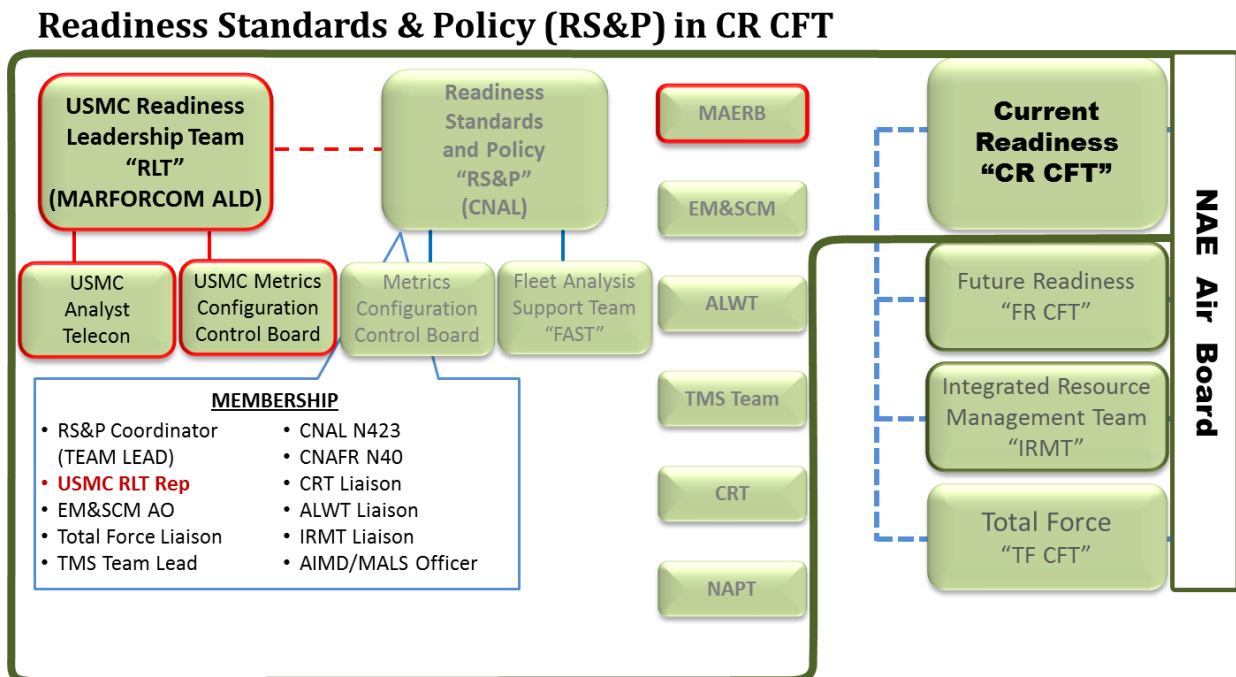


Figure 2.6. Readiness Standards and Policy in the CR CFT

b. Focus. The RS&P Team is focused on the readiness processes and defining the CR CFT metrics that describe them and acts as the

conduit for CR CFT governance to the TMS teams. The RS&P team relies on linkages to other NAE processes such as the EM&SCM, TF, and IRMT CFTs (Naval manpower management and cost management). Primary processes incorporated under the RS&P Team include:

- (1) Promulgate policy from the CR CFT leadership.
- (2) Manage Navy resource allocation, readiness, and trained manpower entitlements.
- (3) Coordinate the efforts of the Metrics Configuration Control Board (MCCB).
- (4) Support TMS Team standup, development, and evaluation including both existing and new teams.
- (5) Conduct oversight of AIs execution for the CR CFT.
- (6) Identify EV improvements.
- (7) Provide feedback and guidance to the TMS Teams based on the outcome of the TRW, the CR CFT brief, and the NAE Air Board brief.
- (8) Conduct periodic reviews of, make changes to, and distribute the CR CFT Handbook.

c. Deliverables. Deliverables provide concise analysis and recommended actions to achieve readiness goals in a cost-wise and efficient manner. The RS&P team will supply the TMS Teams with programmatic and administrative oversight on all matters concerning the execution of enterprise goals and help identify and implement cost-avoidance practices. Specifically:

- (1) Define requirements for T-Rating, RFT, and trained crews, by TMS, to include establishment of standards.
- (2) Recommend cost of readiness reduction strategies.
- (3) Identify cost savings achieved and available for reinvestment.
- (4) Ensure effective cost management processes are in place, including result and driver metrics.
- (5) Share best practices captured across the enterprise.
- (6) Resolve identified barriers that directly contribute to cost-wise readiness.
- (7) Recommend formal policy changes made in support of cost-wise readiness, including those that affect processes, behavior, or cost management.

(8) Develop end-to-end process linkage with known contributions to readiness and specific cost management.

d. Readiness, Standards, and Policy Team (RS&P) Membership. (See Figure 2.6) Includes:

- (1) RS&P Coordinator (Lead).
- (2) USMC RLT Rep.
- (3) EM&SCM Action Officer.
- (4) Total Force Liaison.
- (5) TMS Team Leads.
- (6) CNAL N423.
- (7) CNAFR N40.
- (8) Carrier Readiness Team (9) Liaison.
- (9) ALWT Liaison.
- (10) IRMT Liaison.
- (11) Aircraft Intermediate Maintenance Department/MALS Officer.

7. The Fleet Analysis Support Team (FAST)

a. Mission. Comprised of members from each TMS Team, the FAST is an essential link between the policy-making body and execution at the TMS level. Through regularly scheduled meetings, the FAST is able to receive the latest information on CR CFT decisions and provide feedback to the RS&P leadership regarding barriers and successes with respect to fleet execution of the CR CFT strategy. Members are responsible for representing RS&P/RLT decisions to the TMS Team and are to ensure accurate and timely submission of key metric data from their squadrons.

Fleet Analysis Support Team (FAST) in CR CFT

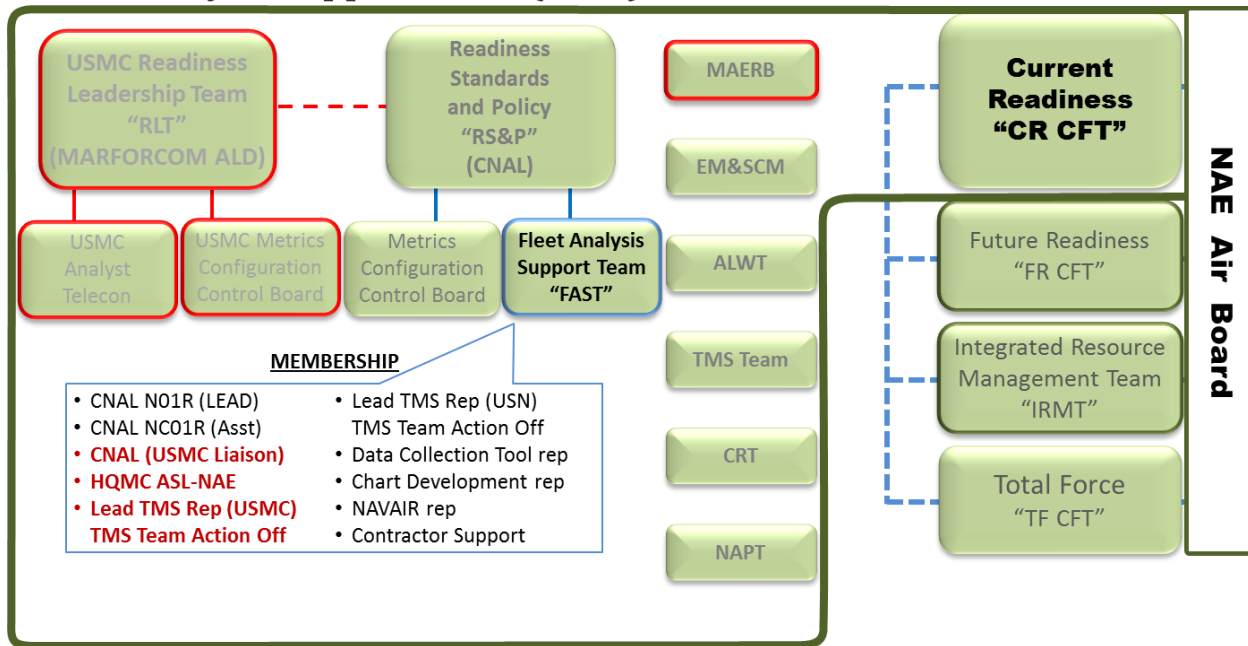


Figure 2.7. Fleet Analysis Support Team in the CR CFT

b. Expected Impact. FAST members are expected to be the subject matter experts at the MAG-level for all RS&P/RLT issues. Typically, the lead FAST member for a TMS Team would be the MAG-level CR Action Officer (AO). This Action Officer should facilitate the necessary training and ensure processes are in place that will result in an accurate, timely, and efficient flow of data from the squadrons through the MAGs in support of CR metrics. Through regular attendance at FAST meetings, they will attain a current knowledge of RS&P/RLT policy changes and initiatives and will pass this information to members within their staffs and squadrons, as required. The FAST Members will continually evaluate the TMS standards and recommend changes through their respective TMS Lead and the RS&P/RLT Team as required.

c. Fleet Analysis Support Team (FAST) Membership. (See Figure 2.7) Includes:

- (1) RS&P Coordinator (Lead).
- (2) RS&P Asst Coordinator.
- (3) TMS CR AO.
- (4) Wing/TMS Team Advisors.

(5) TMS Team Analyst.

(6) NAVAIR Representative.

(7) Data Collection Tool/Control Chart Development Representative.

8. Metrics Configuration Control Board (MCCB) - USMC

a. Mission. Comprised of representatives of USMC CR, the USMC MCCB serves as the clearinghouse to the RLT by systematically reviewing all metrics to ensure effective incorporation into the Marine Aviation CR program.

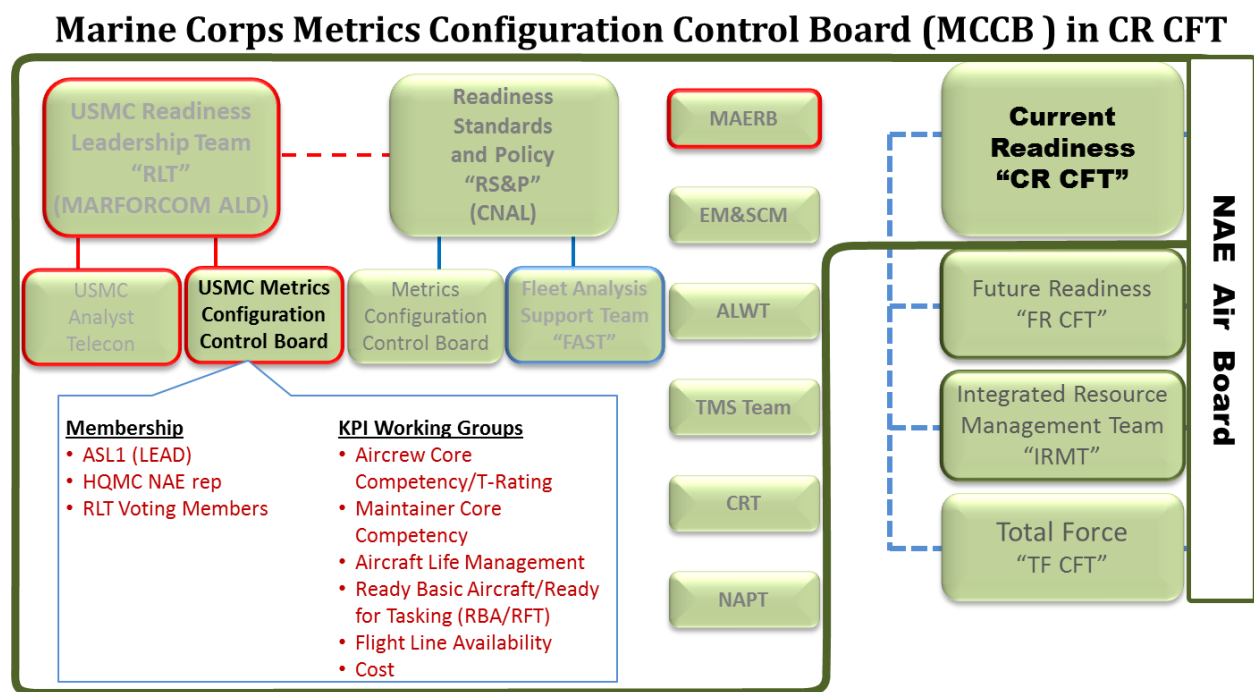


Figure 2.8. Marine Corps Metrics Configuration Control Board in the CR CFT

b. Expected Impact. The MCCB is expected to formulate, re-assess, and provide recommended metrics to the RLT for consideration and, ultimately, to the CR CFT leadership for consideration and approval. Metrics shall be relevant (i.e. aligned to accepted key performance indicators), support cost-wise readiness, and enable leadership to make informed, actionable decisions about gap reduction.

c. Responsibilities. The MCCB will:

(1) Provide metrics management and configuration control.

(2) Provide structure and discipline to the metrics assignment process.

(3) Provide recommendations to the MAERB concerning metrics assessments and prioritization of implementation.

(4) Liaise and integrate functions with the CR MCCB.

(5) Provide support to TMS Teams concerning implementing new metrics.

d. Metrics Configuration Control Board (MCCB) Membership. MCCB is comprised of all of the voting members of the RLT and is facilitated by the HQMC NAE Executive Staff. MCCB supports five working groups (WG) that are aligned with the Marine Corps NAE key performance indicators. The WG are: T-Rating WG, Maintainer Core Competency WG, ALM WG, RBA/RFT WG, and Cost WG.

9. The Engineering, Maintenance, & Supply Chain Management (EM&SCM) Cross Functional Team (CFT). The EM&SCM CFT facilitates Navy and Marine Corps Continuous Process Improvement (CPI) by enhancing engineering, maintenance, and supply chain processes. It recommends policy changes and implements common, results-driven operational, logistics, maintenance manpower, and cost metrics as they apply to the NAE processes.

a. Purpose. The EM&SCM Team exists to develop and execute strategies to maintain the health of the fleet and reduce readiness gaps and Operations & Support (O&S) costs. The team monitors aircraft material condition, supply posture, and depot-level production, and the impact each has on the current health and readiness of the fleet. The team also recommends policy changes and implements results-driven engineering, maintenance, supply, and logistics solutions as they apply across the NAE.

b. Organization and Key Members. The EM&SCM CFT resides within the CR CFT of the NAE, and maintains linkages with all other NAE CFTs (i.e., FR, TF) and sub-teams to ensure optimal integration and implementation of engineering, maintenance, and supply-related goals and processes. EM&SCM has five permanent Flag/General Officer leads:

- (1) NAVSUP WSS 00
- (2) COMFRC
- (3) AIR-6.0
- (4) AIR 4.0
- (5) DLA-A
- (6) ADCA(S), as required

c. EM&SCM Leadership Staff includes a Chief Staff Officer and four AOs:

- (1) NAVAIR 6.8.2.1
- (2) NAVAIR 4.0
- (3) NAVSUP WSS 3N
- (4) DLA-A AO

Engineering, Maintenance & Supply Chain Management (EM&SCM) in CR CFT

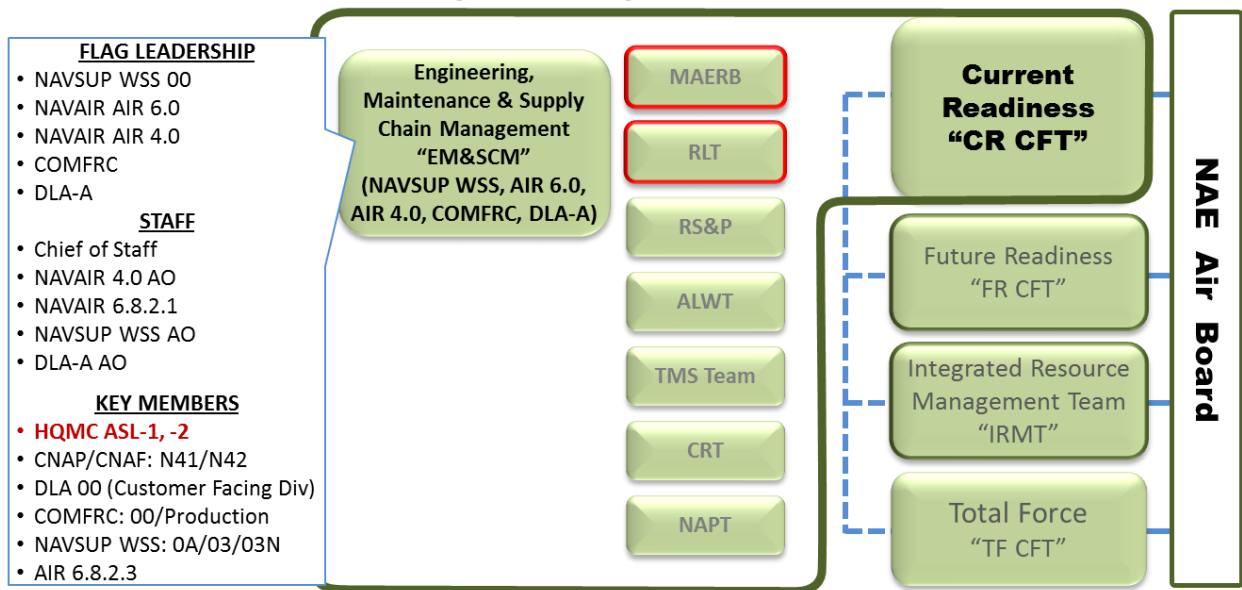


Figure 2.9. Engineering, Maintenance, & Supply Chain Management (EM&SCM) in the Current Readiness Cross Functional Team (CR CFT)

d. EM&SCM Core Team members come from several key positions within the NAE, including:

- (1) DLA 00 (Customer Facing Division)
- (2) COMFRC 00/COMFRC Production
- (3) NAVSUP WSS 0A/03/03N
- (4) AIR-6.8.2.3
- (5) CNAP/CNAF N41/N42
- (6) HQMC ASL-1/2

Figure 2.9 depicts the general participants in the EM&SCM Team.

c. Focus. The EM&SCM Team focuses on efficiencies in all integrated logistics support processes (including EM&SCM policies) with optimal reliability and cost cycle time criteria to meet established aircraft readiness entitlements. Supply Chain Management (SCM) processes include material requirements forecasting, scheduling, contracting, purchasing, buying management, inventory management, logistics, and distribution. Maintenance processes include induction, Beyond Capable Maintenance Interdiction (BCMI), planning and estimation, scheduling, diagnostics/troubleshooting, repair, quality assurance/analysis, and delivery.

d. Scope and Boundaries. The EM&SCM Provider Community manages systematic, multi-platform near term issues throughout the NAE briefing cycle. As the element responsible for oversight of engineering, supply and maintenance policy and processes within the NAE, the team's focus includes, but is not limited to, the following:

- (1) Improved management of funding and reduce funding volatility.
- (2) Improved visibility into aircraft utilization, Global Force Management (GFM), and GFM volatility.
- (3) Recommendations to TYCOMS on changes to aircraft utilization/GFM in order to maximize the health of the Fleet.
- (4) Provide to NAE leadership an Enterprise-level view of the health of Naval Aviation platforms from a structural integrity perspective .
- (5) Improved engineering capacity and availability.
- (6) Timely engineering dispositions.
- (7) Improved Type/Model/Series (TMS) corrosion control and improve/reduce material condition variance.
- (8) Improved Depot-Level throughput and overall performance at FRCs.
- (9) Staffing challenges affecting readiness and affordability.

e. Responsibilities. The EM&SCM CFT will:

- (1) Understand, provide oversight of, and recommend policy for end-to-end NAE engineering, maintenance, and supply chain management processes.
- (2) Implement common, results-driven operational, logistics, engineering, maintenance manpower, and cost metrics as they apply to EM&SCM throughout the NAE.

(3) Identify barriers and implement resolutions, as needed, including those elevated by the TMS Teams.

(4) Execute the Enterprise continuous process improvement (CPI) implementation plan in order to improve readiness.

(5) Facilitate two-way communication between operational supporting logistics infrastructure.

(6) Provide coordinated support for aircraft and weapons systems throughout their life cycle.

f. Deliverables. The EM&SCM CFT will:

(1) Aid TMS Teams in attaining RFT aircraft at reduced cost.

(2) Support accomplishment of CR CFT goals related to EM&SCM processes.

(3) Provide efficient and effective end-to-end maintenance and replenishment process, with defined ownership and links to other NAE processes.

(4) Provide effective results and driver metrics for each process.

(5) Support effective, efficient, and timely barrier resolution.

(6) Contribute to the effective capture and dissemination of lessons learned throughout the supply chain management system (both maintenance and replenishment).

(7) Implement formal policy changes made in support of cost-wise readiness, including those that affect processes, behavior, or cost management.

10. Type/Model/Series (TMS) Teams

a. Background & Purpose. Navy TMS Teams were initially established by CNAF and NAVAIR under the NAVRIP program in December of 2002. Marine Corps TMSs joined the NAE in 2007. The TMS Teams gather lessons learned from the removal of barriers within the TMS. They meet regularly to review CpCs, identify performance gaps, identify barriers to performance improvement, establish Barrier Removal Teams (BRTs), and ensure gap closure activities are promptly implemented and tracked to completion.

b. Type/Model/Series (TMS) Team Membership, Roles, and Responsibilities. TMS Team membership is fluid and is decided upon by the TMS Team Lead. Figure 2.10 depicts representative TMS Team membership.

c. Type/Model/Series (TMS) Team Lead. The MAG CO assigned as TMS Lead by DC(A) shall:

- (1) Lead the TMS Team.
- (2) Develop and present all formal NAE briefs (TRW, MAERB, CR-CFT, Air Board, O&S Cost Deep Dive, and Mid-Cycle Reviews, or as required by other NAE forums) for the TMS in conjunction with the PMA.
- (3) If the USMC TMS is also a Navy TMS, work and coordinate with the Navy TMS Lead to create and deliver a coordinated NAE briefs.
- (4) Provide Monthly Analysis Summaries via the RFT Gap Analysis charts and speaker notes to the USMC CR Action Officer/Senior Analyst and CNAP/CNAF N423 as described in chapter 4.
- (5) Ensure that the TMS Readiness Standards accurately reflect the sum of all TMS requirements.
- (6) Understand RFT Availability, Training, Maintainer Core Competency, Cost Gaps, and Sustainment metrics. Ensure the TMS Team focuses on resolving gaps in performance to attain optimum squadron readiness through the Sortie Based Training Program.

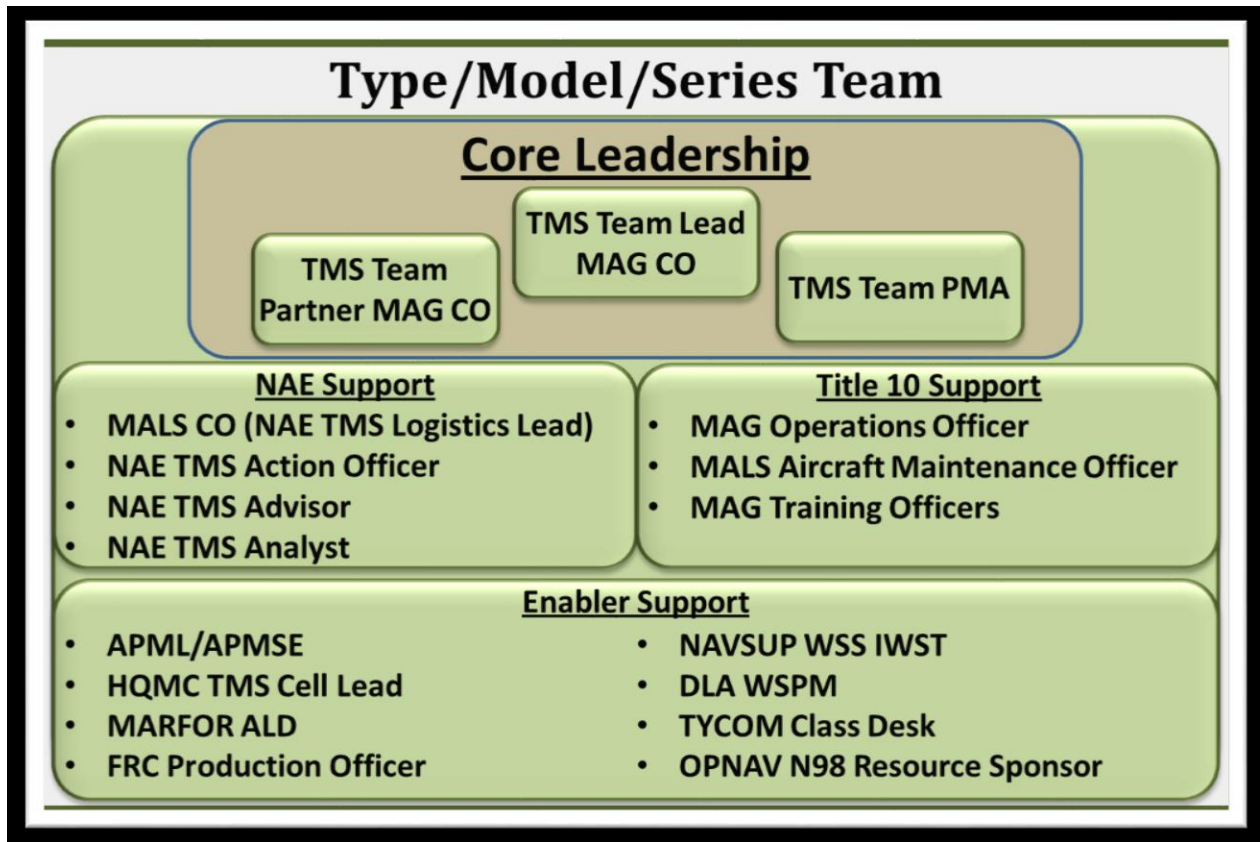


Figure 2.10 Type/Model/Series (TMS) Team

d. Type/Model/Series (TMS) Team: Partner Group. The MAG COs shall:

(1) Directly support the TMS Team Lead and participate in all formal TMS specific NAE briefs.

(2) Help the TMS Lead develop the equipment list and definitions that determine RFT calculations.

(3) Help the TMS Lead develop TMS particulars on RBA and RFT definitions. Recommend the flight line requirements based on operational commitments.

(4) Maximize collaboration with their respective Wing ALD and MALS Site Core Teams to form BRT, when appropriate.

(5) Utilize Continuous Process Improvement Management System (CPIMS) and Enterprise Logistics Analysis Tool to capture BRT actions as a centralized repository of improvement efforts.

(6) Understand RFT and cost gaps across the TMS, and work to achieve RFT requirements to attain aircrew training and readiness goals. Ensure TMS Team focuses on resolving RFT, readiness and cost issues and adjusts as requirements change.

(7) Ensure partner MAGs have proper representation during NAE briefings.

(8) In conjunction with the TMS Lead, help develop and present all formal NAE briefs (TRW, MAERB, CR CFT, Air Board, O&S Cost Deep Dive, and Mid-Cycle Review) for the TMS.

e. Type/Model/Series (TMS) Team: Membership from the Lead Group.

(1) MALS CO, the Type/Model/Series (TMS) Logistics Lead. The MALS Commander is the senior aviation logistician within the MAG. As such, the MALS Commander is the principal aviation logistics advisor to the MAG Commander and shall serve as the TMS Logistics Lead. (NOTE: The MAW Comptroller is available to advise commanders on all financial management issues). The MALS CO shall:

(a) Ensure all MALS Aviation Logistics (AVLOG) (MFs, Individual Material Readiness List/SE, Personnel, Equipment, Supply, Training, Ordnance, and Package, Handling, Storage and Transportation (PHS&T)) efforts are coordinated, prioritized, and aligned to the flying squadron demand patterns.

(b) Monitor Operations and Maintenance, Navy Non-Flying Hour Program (NFHP) funding through the Supply Accounting Division (SAD), with the exception of NFHP TAD funding, which is managed at the Group level.

(c) Manage FHP funding through the SAD. The MALS Commander should be aware of the following cost drivers of the FHP: Aviation Fleet Maintenance (AFM), Aviation Depot Level Repairable (AVDLR), BCMI, Contract Maintenance Support, Fuel/Flight Equipment, Fleet Replacement Squadron (FRS). Active participation in the NAE Logistics Cost War Rooms helps facilitate this process.

(d) Ensure MALS capabilities are based on Ready Mission Sets and RBA asset availability (RBA + RMS = RFT).

(e) Understand and articulate the AVLOG capability and capacity that a MALS provides.

(f) Monitor AVLOG production and capability to help ensure that support can be provided in both garrison and deployed environments.

(g) Provide visibility of cost data (i.e., AVDLR, Consumables (FM) and Fuel (FF) to individual flying squadrons as reflected in both the Cost Performance Index (CPI) and Execution Index (EI)).

(h) Lead MALS efforts to improve and sustain AVLOG processes that directly increase RBA/RFT availability.

(i) Brief the RLT, Logistics Cost War Room (LCWR), EM&SCM, and Corrosion Metric Review (CMR) as required.

(j) Serve as primary retail (MALS-controlled, local supply stock) logistics voice of the TMS.

(k) Conduct liaison with MALS COs of the same TMS and other supporting agencies (Original Equipment Manufacturer, DLA, NAVSUP, Fleet Readiness Center (FRC), Program Manager-Aviation (PMA), etc...) on fleet-wide issues that impact RBA/RFT availability beyond the direct control of the individual MALS Commanding Officers.

(l) Provide both long and short-term plans of action to address the Integrated Logistics Support (ILS) elements shortfall, by coordinating with the logistics partners within the TMS Team.

(m) Report any ILS elements gaps or shortfalls that hinder a TMS's ability to achieve the required aviation logistics output to enable RBA/RFT.

(n) Participate in and conduct monthly Logistics Cost War Rooms to facilitate RBA/RFT gap discussions with supporting MALS commanders prior to the CR Action Officer (CR AO) meetings and Logistic Cost War Rooms to properly identify root causes of gaps and develop Actions Items (AIs) to mitigate gaps. Conduct Logistics Cost

War Rooms to analyze Flightline gaps. The monthly LCWR will complement the AO Telecon and build towards the TMS VTC.

(o) Conduct bi-weekly Cost Analysis Team (CAT) meetings.

(2) CR Action Officer (CR AO). The CR AO is assigned by the MAG CO/TMS Lead. The CR AO coordinates and conducts liaison with other members of the TMS Team in order to (this list is not all inclusive and may include other duties as the MAG CO/TMS Lead deems necessary):

(a) Provide monthly analysis summaries via the RFT Gap Analysis charts and speaker notes to the MAG Commander/TMS Lead and to HQMC as needed.

(b) Ensure that the TMS Readiness Standards accurately reflect the sum of all TMS requirements.

(c) Provide abbreviated brief formats, as required (Templates for briefs can be downloaded from the CNAP/CNAF NAE Portal).

(d) Collect, populate, and communicate all gained efficiencies into NAE ROI database.

(e) Monitor and drive BRT progress and gap closure. Leverage Wing ALD and MALS Site Core Teams to form BRTs, when appropriate.

(f) Monitor readiness, maintenance, and cost metrics for trends and indications of changes in trends, as a result of Continuous Process Improvement (CPI) or BRT activity (Focus on EI & Schedule Performance Index (SPI)).

(g) Escalate, for further action, any barriers that have been determined to be beyond the scope of the TMS Team. Escalation should be made to a specific CR CFT sub-team, MAERB, or via the TYCOM as appropriate. The TMS Team will maintain co-ownership of the barrier. Escalation can be made at any time.

(h) Share lessons learned with other MAG's, MAWs, and other TMS Teams.

(i) Ensure TMS Team focuses on resolving readiness and cost issues and makes adjustments, as requirements change.

(j) Ensure TMS Lead has proper support and representation available during NAE/CR briefings.

(k) Develop all formal NAE briefs (TRW, MAERB, CR-CFT, Air Board, O&S Cost Deep Dive, and Mid-Cycle Reviews) for the TMS Lead in conjunction with the supporting members of the TMS Team.

(3) MALS Site Core. It is imperative that the MALS Continuous Process Improvement (CPI) site core teams actively participate in and contribute to any MAG-level TMS Team meetings or activities related to aircraft readiness. The site core teams will consist of, at a minimum, four Green Belt (or higher) certified Marines, all of whom will have had relevant and applicable previous experience in the Aviation Supply and Maintenance Departments. As readiness degraders and other operational impediments are identified by the TMS Teams, the site cores have trained personnel with resources and capabilities that can be applied in order to bring measurable value to the TMS Lead/MAG Commander in terms of aircraft readiness and cost per flight hour. Specific resources and capabilities resident within the MALS site core teams are:

(a) Knowledge and understanding of the TOC Process/value stream mapping skills and software, which will enable the identification and removal of non-value added waste as defined by the customer.

(b) Training in root cause analysis and statistical process control, which will enable the identification, removal, and control of the critical few factors that cause the overwhelming majority of problems (Beyond Capable Maintenance, long delivery times, etc.)

NOTE: The above is not all-inclusive and is intended to give the TMS Lead/MAG Commander basic situational awareness of a valuable capability resident with the MALS and the Group.

(4) Naval Aviation Enterprise (NAE) Contract Advisor and Analyst. The advisor and analyst will:

(a) Both: Principally focused on Core Competent Units.

(b) Both: Actively participate in TMS meetings, assist in setting the agenda, providing assistance in meeting preparation, post meeting analysis, and feedback. Facilitate the development of deliverables and AI management.

(c) Both: Support the gap closure process by teaching and coaching the use of process improvement tools and methodology. (Cross functional and Barrier Removal Teams, Lean/Sig Sigma, TOC, etc...)

(d) Both: Provide in-briefs to MAG COs, PMAs, MALS CO etc.

(e) Both: Participate in the writing and review of Basis for Measurement (BFMs) and development of CpCs to depict KPIs.

(f) Advisor: Mentor team and team members, as required

(g) Advisor: Monitor improvement of actual cycle time, AI management, Work in Progress (WIP) productivity, etc.

(h) Analyst: Conduct data collection and analysis to define/refine goals, requirements, entitlements, and actual performance.

f. Type/Model/Series (TMS) Team Membership: Provider Group

(1) Program Manager-Aviation (PMA). The PMA will:

(a) Directly support the TMS Team Lead and participate in all formal TMS-specific NAE briefs.

(b) Assist TMS Lead in the briefing cycle to include preparation and presentation to the TRW, MAERB, CR-CFT, NAE Air Board, O&S Cost Deep Dive, and Mid-Cycle Reviews.

(c) Provide direct Program Management TMS focus on total TMS readiness.

(d) In conjunction with NAVSUP WSS and DLA-A, or other stakeholders, prioritize and evaluate barriers to achieving RFT beyond the scope of the local TMS Team.

(e) Interface directly with NAVAIR subject matter experts and appropriate Program Executive Officer (PEO) to define additional resources/processes required to resolve impediments to achieving RFT and reducing costs.

(f) Review maintenance plans to investigate opportunities to turn high cost consumables into repairables, establish additional repair capabilities where warranted, and examine contracting strategies for opportunities for best value contracts.

(2) Naval Supply Systems Command, Weapons System Support (NAVSUP WSS). NAVSUP WSS has agreed to:

(a) Provide Navy and Marine Corps Aviation and supply support for the weapons systems to achieve our readiness goals.

(b) Designated lead to integrate supply support and supply chain management throughout the NAE. Accordingly, the Commander, NAVSUP WSS, serves as co-lead of the EM&SCM Team with NAVAIR AIR 6.0, NAVAIR AIR 4.0, and DLA-A.

(c) NAVSUP WSS will review maintenance plans to identify opportunities to redesignate high cost consumables as repairables, establish additional repair capabilities where warranted, and examine

contracting strategies for opportunities to provide the most efficient support at the best value.

(d) Provide necessary resources for removing obstacles to improved performance.

(e) Integrate efforts across the TMS Team necessary to efficiently deliver Naval Aviation warfighting readiness at the required levels in execution year and longer range.

(f) Improve and support efforts to manage, prioritize and align resources (e.g., Personnel, Equipment, Supply, Training, Ordnance - PESTO) and activities to meet TMS Team goals. Identify and remove TMS Team-level constraints and escalate higher level constraints to higher headquarters.

(g) Be prepared to brief repairable issues and corrective strategies associated with Sustainment metrics.

(h) Provide empowered participation in TMS Teams, to include briefs with NAE interests.

(3) Defense Logistics Agency - Aviation(DLA-A). DLA-A has agreed to:

(a) Provide necessary resources for removing obstacles to improved performance.

(b) Integrate efforts across the TMS Team necessary to efficiently deliver Naval Aviation warfighting readiness at the required levels in execution year and longer range.

(c) Improve and support efforts to manage, prioritize, and align resources (e.g., PESTO) and activities to meet TMS Team goals.

(d) DLA will review maintenance plans to identify and investigate opportunities to redesignate high cost consumables as repairables, establish additional repair capabilities where warranted, and examine contracting strategies to provide the most efficient support at the best value.

(e) Identify and remove TMS Team-level constraints and escalate higher level constraints to higher headquarters.

(f) Provide empowered participation in TMS Teams, to include briefs with NAE interests.

(g) Be prepared to brief consumable issues associated with Sustainment metrics.

(4) NAVAIR 6.0 and Commander, Fleet Readiness Center (COMFRC). NAVAIR 6.0 and COMFRC have agreed to:

(a) As the NAE's lead logisticians, manage the organic off-flight line portion of the Naval Aircraft Maintenance process, and are key enablers in delivering required levels of readiness.

(b) Provide necessary resources for removing obstacles to improved performance.

(c) Facilitate the Aviation Rapid Action Team (ARAT) process in order to develop new or improved repair capability for top degraders across the Fleet.

(d) Integrate efforts across the TMS Team necessary to efficiently deliver Naval Aviation warfighting readiness at the required levels in execution year and longer range.

(e) Review maintenance plans to investigate opportunities to turn high cost consumables into repairables, establish additional repair capabilities where warranted, and examine contracting strategies for opportunities for best value contracts.

(f) Improve and support efforts to manage, prioritize and align resources (e.g., PESTO) and activities to meet TMS Team goals.

(g) Identify and remove TMS Team-level constraints and escalate higher level constraints to higher headquarters.

(h) Provide empowered participation in TMS Teams, to include briefs with NAE interests.

g. Type/Model/Series (TMS) Team Membership: Other Headquarters/Organization Resources.

(1) Headquarters Marine Corps (HQMC), Aviation Plans and Policies (APP). Since the Blue in Support of Green (BISOG) MOA was signed in August 2016, HQMC, APP shares the responsibility, with OPNAV N98, for the programming of shared funds used for aviation readiness.

(2) Office of Chief of Naval Operations (OPNAV) N98. OPNAV N98 has agreed to:

(a) Be responsible for advocating and resourcing Fleet requirements necessary to deliver future warfighting capability. As the lead for the NAE FR CFT, OPNAV N98 is committed to effectively produce required levels of FR while optimizing costs by identifying readiness related issues to the NAE EXCOMM and by ensuring readiness requirements are robustly addressed in pre-acquisition, acquisition, and operational program phases.

(b) Integrate efforts across the TMS Team necessary to efficiently deliver Naval Aviation warfighting readiness at the required levels in execution year and longer range.

(c) Improve and support efforts to manage, prioritize and align resources (e.g., PESTO) and activities to meet TMS Team goals.

(d) Identify and remove TMS Team-level constraints and escalate higher level constraints to higher headquarters.

(e) Provide empowered participation in TMS Teams, to include briefs with NAE interests.

(3) Type Commander: Class Desk. The TYCOM Class Desk will:

(a) With HQMC Aviation Weapons Requirements (APW) & ASL, coordinate and prioritize resource requirements to support attainment and sustainment of near and long term Naval Aviation readiness goals. These goals include balancing and aligning interactions among Organizational, Intermediate, and Depot level maintenance and the logistics infrastructure which supports that maintenance.

(b) Integrate efforts across the TMS Team necessary to efficiently deliver Naval Aviation warfighting readiness at the required levels in execution year and longer range.

(c) Improve and support efforts to manage, prioritize and align resources (e.g., PESTO) and activities to meet TMS Team goals.

(d) Identify and remove TMS Team-level constraints and escalate higher level constraints to higher headquarters.

(e) Provide empowered participation in TMS Teams, to include briefs with NAE interests.

(4) Office of Chief of Naval Operations (OPNAV) N83. OPNAV N83 has agreed to:

(a) Be responsible for assessing fleet-identified requirements and providing resources to attain and sustain the CNO & CMC readiness goals. OPNAV N83 is committed to enhancing Naval Aviation readiness through continuous process improvement (CPI) and in-depth evaluation of requirements.

(b) Integrate efforts across the TMS Team necessary to efficiently deliver Naval Aviation warfighting readiness at the required levels in execution year and longer range.

(c) Improve and support efforts to manage, prioritize and align resources (e.g., PESTO) and activities to meet TMS Team goals.

(d) Identify and remove TMS Team-level constraints and escalate higher level constraints to higher headquarters.

(e) Provide empowered participation in TMS Teams, to include briefs with NAE interests.

h. Type/Model/Series (TMS) Team Administration

(1) Type/Model/Series (TMS) Team Charter. Each TMS Team charter shall provide direction regarding:

(a) Gap identification (difference between requirement and actual) with respect to personnel readiness (i.e. maintainer, aircrew), material readiness (i.e. aircraft, aircraft subsystems), and cost performance.

(b) BRT and MALS Continuous Process Improvement (CPI) Site Core and Wing Aviation Logistics Management Advisory Teams. Discuss the use of CPIMS and Enterprise Project Alignment Tools (EPAT) to capture the findings of the BRT.

(c) Cost performance and trends using established metrics; specifically, EI, CPI, and SPI.

(d) Barrier escalation to neutralize barriers that are beyond the capability of the TMS Team. Escalation should be made to a specific CR CFT sub-team, MAERB, or TYCOM. The TMS Team will maintain co-ownership of the barrier. Escalation can be made at any time regardless of the briefing cycles.

(e) Lessons learned with Wings and other TMS Teams. Wings and other TMS Teams access CPIMS database to understand and replicate best practices.

(2) Type/Model/Series (TMS) Meetings. TMS Team meeting guidelines include:

(a) TMS Teams shall conduct recurring meetings to address and analyze the data represented in the CpCs and initiate/update BRT actions. Meetings should be held separately at a minimum on a bi-weekly basis; however, teams may elect to meet more often at the discretion of the lead MAG CO.

(b) The first bi-weekly meeting should focus on the previous months RS&P and EM&SCM chart data to identify gaps. Attendance should include those personnel directly responsible for collecting and analyzing the data. The focus of this meeting should be to identify gaps that would benefit from instituting a BRT (e.g., integrated product team or operational planning team to solve a problem).

(c) The second bi-weekly meeting should bring together all cross-functional TMS Team members and focus on the actions and recommendations of the BRT. COMNAVFORINST 3710.5 provides more information on BRTs.

(d) TMS Teams who are new to the CR process, or experiencing a high turnover rate, will benefit from a face-to-face meeting. Once new teams are established, it is recommended to conduct one meeting per week moving to two per month once progress is achieved and the BRTs function effectively.

Generic TMS Team “Battle Rhythm”

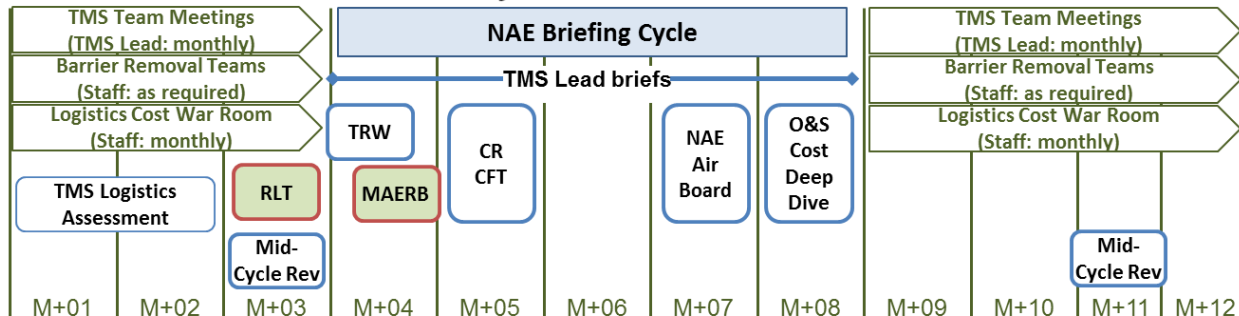


Figure 2.11. Battle Rhythm

(3) Meeting Attendance and Representation. It is acknowledged that the core team members may not be able to attend every meeting. To assure continuity, each should appoint a representative. To provide continuity and to ensure the meetings are effective, the representative should remain in that capacity for as long as possible. The representative will ensure the core team members are fully briefed on any missed meetings and will make timely decisions on behalf of core team members.

(4) Training. Training will be conducted for TMS Team core members befitting the breadth of Navy/Marine Corps responsibilities held by these key people. Training is provided by the Group Advisor/Analyst as well as through HQMC ASL and respective Wing ALD.

i. Marine Aircraft Wings (MAW)

(1) Background & Purpose. The MAW's mission is to provide combat ready expeditionary aviation forces capable of short notice, world-wide deployment to Marine Air Ground Task Force, fleet, and unified commanders. The mission of the MAW is to conduct air operations in support of the Marine Forces to include Offensive Air Support, Anti-air Warfare, Assault Support, Aerial Reconnaissance, Electronic Warfare, and Control of Aircraft and Missiles. MAWs are responsible "to advance and sustain warfighter capabilities" for their respective MEF Commanders. They have historically ensured this by providing support to MAGs from their respective ALD and G-3 commodity

and program-type managers through traditional channels. MAWs shall continue this support utilizing the CR process to improve overall readiness levels by participating as an integral component of the NAE in the execution of such other functions as the Fleet Commander may direct.

(2) Roles and Responsibilities. By integrating into CR and the NAE, the Wing shall:

(a) Wing Aviation Logistics Divisions (ALDs) will provide oversight to maintenance and supply processes, as well as, influencing, affecting and implementing policies and support required to meet and sustain prescribed levels of RFT aircraft.

(b) Establish transparent processes that are managed with metrics, clear ownership, and action plans for closing gaps in accordance with TMS Lead strategies.

(c) Enable General Officer participation in all MAERB Conferences and applicable Air Boards.

(d) Ensure ALDs, G-3s, and G-8s participate as active RLT members. Wing ALDs/G-3s/G-8s will work in support of TMS Leads and participate in the TMS Team Battle Rhythm as active members.

(e) Ensure the full integration and participation of all aviation units in the CR Process.

(f) Institute Continuous Process Improvement (CPI) efforts at Intermediate and Organizational activities leveraging use of the MALS Site Core Teams.

(g) Establish a strategy to support the MAGs within the Aircraft Wing, to include leveraging the MALS Site Core Team at each Group and utilize ALD staffs that align to the MAGs within the Aircraft Wing.

(h) Monitor subordinate command expenditures, staffing, and readiness issues. Control costs and gain efficiencies; seek improvement with how units requisition parts and equipment.

(i) Monitor subordinate commands and equipment. Provide material expediting support for critical components which impact Non-Mission Capable Supply (NMCS) aircraft.

(j) Master CR metrics and set aggressive goals to achieve readiness requirements. Seek to streamline the linkage between provider and sponsors to insure fleet requirements are met.

(k) Assist TMS leads and follow MAGs in the removal of barriers in particular those that are systemic within the Wing/across platforms.

(1) Wing ALDs/G-3s/G-8s will sustain and leverage prior successes learned by others within naval aviation, in particular those lessons learned and efficiencies gained through the NAE that synchronize all aviation logistics efforts to improve readiness within their supported MAG.

j. Headquarters Marine Corps (HQMC) Aviation Type/Model/Series (TMS) Cells. The Marine Aviation Hallway is divided into five major branches (Aviation Plans and Policy (APP), Aviation Weapons Requirements (APW), Aviation Expeditionary Enablers (APX), Aviation Logistics (ASL), Aviation Manpower and Support (ASM)). Personnel are organized to form Cross-Functional cells comprising airframe, capability, and sustainment experts from across the branches. The cells are aligned with major acquisition programs - MV-22, H-1, KC-130, F-35, UAS, CH-53, FA-18, and EA-6B - and each has an O-6 lead to provide a single point of contact and unity of effort. The cells will:

(1) Integrate efforts across the TMS Team necessary to efficiently deliver Naval Aviation warfighting readiness at the required levels in execution year and longer range.

(2) Improve and support efforts to manage, prioritize and align resources (e.g., PESTO) and activities to meet TMS Team goals. Identify and remove TMS Team-level constraints.

(This page intentionally left blank)

Chapter 3

Metrics and Analysis

1. Introduction. This chapter discusses KPIs, BFM, Standards, Metrics, TMS Team KPIs, and Sustainment Metrics. Additionally this chapter outlines the analysis of each of these metrics. By constant and proper use of each metric, improvements will be realized by deriving actionable data provided by the metrics to resolve issues or problems.

2. Key Performance Indicators (KPIs). To create performance base measurements, TMS Teams recommend which processes should be measured, what metrics would be used for the analysis, and which of those metrics are to be considered KPIs. A KPI is a measure of significant importance and provides actionable data.

a. Basis for Measurement (BFM). Metrics are defined by a key document called the BFM. Each metric will have several components which are described in the BFM. The two main components of a metric are the measured data and the required or expected performance. The BFM also describes the purpose for measuring the data, the specific data source, the justification for the entitlement/requirement, any assumptions made, required computations, a sample panel or graphic, and the CpC in which it will appear. BFMs standardize the metrics reporting format and are applicable throughout the Marine Corps. Current versions of all BFMs are maintained by the NAE on the NAE CR CFT SharePoint site at:
https://usff.portal.navy.mil/sites/NAE/current_readiness/CR_BFM/default.aspx

b. Type/Model/Series (TMS) Standards. CR Standards for aircrew, aircraft, and maintainers are included in "Standard Tables" developed by individual TMS Team subject matter experts. They are approved at HQMC (APP/ASL) based upon TMS Team submissions, and serve as a measure of readiness and the genesis for all CR reporting. TMS standards support the definition of a Core Competent Unit and help to define the performance goals TMS Teams seek to achieve. They contain the actual requirement numbers described in each BFM. Data measured against a standard feeds all cockpit charts in the CR system.

c. Presentation

(1) Cockpit Charts (CpC). Together, measurements and requirements are represented in specially constructed trend/control charts depicted much like gauges in the cockpit, hence "Cockpit Charts". Data is collected monthly from the authoritative data sources, and is graphically depicted as panels within the CpC(s). Raw data is generated at the squadron level, summarized at the MAG-level and ultimately combined into a TMS roll-up.

(2) Quarterly Summary. KPI data from each TMS is combined and provided to the NAE leadership on a quarterly basis. The CpCs provide a comprehensive picture; however, only performance gaps (differences between actual performances to requirements) are addressed at major briefings.

(3) Actionable Data. The success of the CR process depends upon everyone having a working knowledge of the BFM, the TMS Team Standards, and the interrelationship of the information displayed within the CpCs. Leadership must be able to interpret and understand the information in the CpCs to use them effectively. The information must be able to assist in developing actionable plans to effect changes improving performance and meeting readiness goals.

(4) Changes to Metrics. Metrics are not built to be static. Requirements change based upon evolving mission sets, deployment paradigms, aircraft/system modifications, and T&R transitions. For these reasons, TMS Teams should be continually critical of their metrics. If standards change or a component to a BFM is modified, TMS Teams should recommend commensurate changes in order to ensure accuracy in the presentation of the metric in a CpC. Proposed metrics changes are then approved through the MCCB process.

3. Marine Corps Current Readiness Metrics. Marine Aviation CR metrics are governed through a USMC MCCB. The MCCB manages the configuration of all specific CR metrics and reviews all recommended changes to metrics. The MCCB forwards its recommendations for changes to the RLT and then to the MAERB for final decision. The MAERB may delegate approval or rejection authority to the RLT. For USMC/USN shared metrics, the process is similar. Once the updated metric is approved by the Navy and the Marine Corps through their individual processes, it goes to the RS&P for joint approval.

a. Defense Readiness Reporting System - Marine Corps (DRRS-MC)

(1) Overview. The majority of the CR Metrics are based on the CR reporting system and influence reporting in the DRRS-MC. DRRS-MC is a SIPR-based, web-enabled, service readiness reporting program that enables the Marine Corps to report the readiness of its units to execute the National Military Strategy. DRRS-MC reports readiness based on metrics and mission essential task-based mission assessments. It highlights deficiencies in the areas of training, personnel, equipment, and supply.

(2) Relationship. The characterization of the training readiness status of a squadron in terms that represent actionable elements can be identified in some form in the DRRS reporting format. Cost Per Hour (CPH) data from Aviation Cost Evaluation System (ACES)/Aviation Financial Analyst Support Tool (AFAST) falls outside the scope of DRRS.

b. Type/Model/Series (TMS) Team Top Key Performance Indicators (KPIs). TMS Teams shall use the approved Top KPIs, identified below. (Refer to the appropriate BFM for further specific details and definitions). TMS Team shall use the following:

- (1) T-Rating and Aircrew Core Competency (ACC).
- (2) Required Maintainer Competency (RMC).
- (3) Flight Line Aircraft Availability.
- (4) Ready for Tasking (RFT) Aircraft Availability.
- (5) Ready Basic Aircraft (RBA) Availability.
- (6) ALM.
- (7) Cost.



Sample USMC Top Four KPIs

● CPI = 1.06
(Budget vs Actual CPH)
● SPI = .99
(FH Flown vs Plan)
● EI = 1.06
(AVDLR/AFM/FW Demand)
● API = 1.01
(AVDLR/AFM Price)

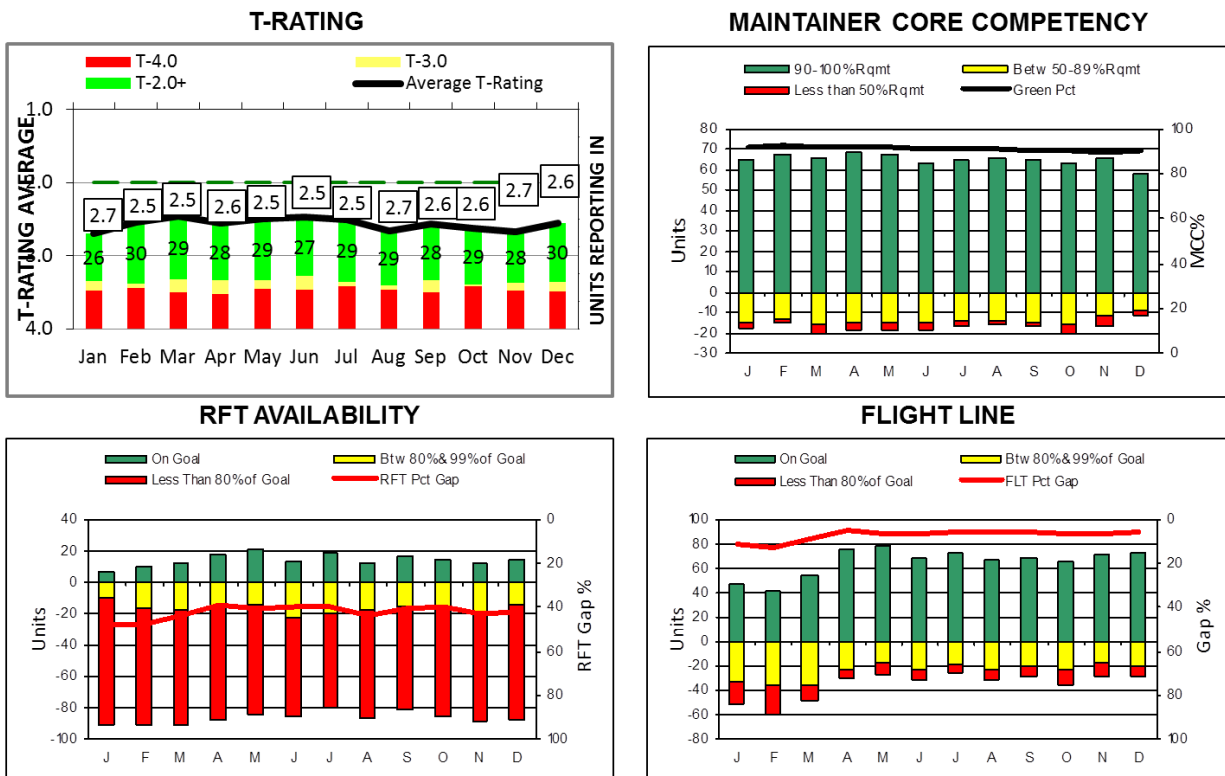


Figure 3.1. Marine Corps' Top Key Performance Indicators (KPIs)

4. Training (T-Rating) and Aircrew Core Competency (ACC)

a. Purpose. The T-Rating panel, used at the TMS Team and Marine aggregate levels, depicts the labeled community's averaged T-Rating as well as the number of community squadrons reporting T-2 or above, T-3, and T-4 in DRRS-MC for a particular month. MCO 3000.13 provides policy and procedures on DRRS-MC reporting.

b. Training (T-Rating) Measurement. A flying squadron's resultant T-Rating in DRRS-MC is the lower rating between the commander's "Combat Leadership assessment" and the unit's "training percentage." TMS T&R Manuals contain CMMR for each combat leadership designation, as well as CMMRs for each Mission Essential Task (MET). The commander compares the number of MET capable formed crews to the Crew CMMR for that MET to determine if the squadron is "trained to standard" for that particular MET.

c. Combat Leadership Assessment. Commander's comparison of the designated combat leader's on-hand compared to the combat leadership CMMR.

d. Training Percentage. Simple percentage of the number of unit METs trained to standard compared to the total number of METs in that Mission Essential Task List (METL). Each MET contains a Training Standard defined by the T&R Crew CMMR for that MET. The commander compares the number of MET capable formed crews to the Crew CMMR for that MET to determine if the squadron is "trained to standard" for that particular MET.

e. Aircrew Core Competency (ACC) and Directed Mission Sets (DMS) Chart. The ACC/DMS chart, used at the TMS Team level, is designed to objectively represent the number of units that are trained across the Core Mission Essential Task List (METL) (ACC Assessment) as well as the number of units that are trained for their assigned Directed Mission Sets (DMS Assessment). ACC reporting is strictly an objective measure of a unit's training accomplishments. ACC may also be used as a drill down to determine why a unit did not achieve T-2.

5. Required Maintainer Competency (RMC)

a. Purpose. The NAE RMC panel, depicted in figure 3.1, shows the number of squadrons that have the required number of Qualifications/Certifications/Licenses in order to operate and deploy in accordance with the Weapon Systems Planning Document (WSPD). Further drill down into RMC (Tier 1, 2, and 3) depicts the QCL Skill Sets for enlisted pay grades E1-E9 for critical maintenance MOSs and compares the QCL Skill Sets available to the Standards approved by the TMS Lead.

b. Required Maintainer Competency (RMC) Standards. Squadron and MAG Maintenance Chiefs, in conjunction with the HQMC Aviation Maintenance Chief, developed the requirements to conduct operations in

accordance with the WSPD for each TMS Team. These Standards were then approved by the TMS Leads, HQMC ASL-1, and the RLT.

*Note: Contractors or contract maintenance personnel shall not be calculated into RMC Standards.

c. Required Maintainer Competency (RMC) Measurement. In order for leadership to quickly assess each unit's maintenance capability, the current system of TMS RMC is made up of a standardized set of KPIs developed by the fleet, under the guidance of the HQMC Aviation Maintenance Chief.

*Note: In understanding that RMC is a standardized measurement based on the KPI, it is beneficial to provide the next level of understanding, with regard to the full accomplishment of training within a given unit. The training burden of a unit is driven by influences such as TMS, level of maintenance (organizational, intermediate or depot), NAMP, and local command policies, to name a few. To better ensure the capture of the entire training requirement within any given unit, aviation maintenance must employ an automated training management system. The current system is referred to as Advanced Skills Management (ASM). ASM provides an easy-to-use web-based interface for Navy and Marine Corps aviation personnel to establish complex training plans. These plans are required for individuals to attain the qualifications, certifications, and licenses needed to achieve unit readiness for tasking goals and for individual career development.

(1) Operationally Capable. The required number of qualified/certified/licensed maintainers and inspectors a maintenance department requires to support units/detachments deployed in accordance with the WSPD, to work the required shifts of maintenance and to provide safe and effective aviation maintenance capacity, including scheduled and unscheduled maintenance and the launch and recovery of aircraft.

(2) Operational Standard. By MOS and in the aggregate, how many Marines of each Skill Set are needed to support the required shifts of maintenance. The six Skill Sets used to provide the quantity and quality comparisons are:

- (a) Safe for Flight.
- (b) Plane Captain (PC).
- (c) Inspector.
- (d) Ordnance Team.
- (e) Hi/Low Power.
- (f) Support Equipment (SE) License/Designation.

(g) Additional areas available for review as leading indicators include:

1. Modified Staffing Requirement and Marines on-hand
2. T&R 4000 assignment

For a more detailed description, refer to the Required Maintainer Competency Basis for Measurement (RMC BFM).

d. Required Maintainer Competency (RMC) Standards Change Request Process. TMS Teams will submit changes to mitigate the high demand low density MOSs, compensate for changes in TMS-wide staffing/manning, etc. The Standards Change Request Form (Appendix C) shall be used to propose changes the standard. Additionally, the TMS Teams shall submit a modified version of the RMC Scorecard (Changes in RED) to appropriately identify the requested changes. Mandatory 18 month review cycle to be conducted during CR Summits, Executive Steering Committee-Slate Conferences, or as directed by ASL Leadership. In lieu of requiring the MCCB and RLT to approve every RMC Standard change/update, units recommending RMC Standards changes shall submit proposed changes via correspondence per the following paragraphs:

(1) Unit Requests A Change. A unit that desires a change and/or correction of the RMC Standard shall make the request to their TMS Team, via online request form or email. The TMS Team, within 10 days of receiving the request, will contact all like-units with the suggested change, via online process or email, in order to solicit feedback and/or recommendations. All units contacted have 10 days to submit their recommendations back to the TMS Team. If the proposed change requires coordination with another community, the originating TMS shall also submit it to the appropriate related TMS. If the community decides, by majority decision, that a change is not necessary, then the originating TMS shall make a record of the suggestion and recommendations and take no further action. If the community decides, by majority decision, that a change is necessary, then the originating TMS shall follow 3.5.4.2. TMS Team Requests a Change as stated below.

(2) Type/Model/Series (TMS) Team Requests a Change. If a unit suggests a change of the RMC Standard and the community concurs by majority decision, then the TMS, via email and NLT 5 days upon receipt of unit comments, shall consolidate comments and provide DC (AVN) ASL-33 a smooth draft of RMC Standards with proposed RMC Standards changes, to include all supporting message documentation from units providing input.

(3) DC (AVN) ASL-33 Actions. Within 10 days upon receipt of draft proposed changes from TMS, DC (AVN) ASL-33 shall release a RMC Standards Change notification to the MARFORs. The MARFORs shall review the proposed change(s) and provide either a concurrence or non-concurrence with justification NLT 10 days after the release of the

change recommendation message. Immediately upon receipt of MARFOR concurrence, DC (AVN) ASL-33 shall announce the Approval, perform an administrative review, and submit for ASL-1 signature. Once the approval is signed, DC (AVN) ASL-33 will issue a RMC Standards Change notification. (See Figure 3.2)

(4) Marine Forces (MARFOR) Actions. MARFORs shall review the proposed RMC Standards change and concur or non-concur with justification to DC (AVN) ASL-33 within 10 days of the change recommendation message release. Unresolved issues shall be forwarded to DC (AVN) ASL-1 for decision. Upon MARFOR concurrence, DC (AVN) ASL-33 shall release a message approving the RMC Standards change.

(5) Required Maintainer Competency (RMC) Standards Change Timeline

| Task | Entity Performing | Task By-Date |
|--|---|--|
| Request for RMC Standards Change, by email | Unit that requests RMC Standards Change | NA |
| Forward proposed change to all applicable units, via email, for review and/or comment. | TMS Team | NLT 10 days after receipt of change request |
| Submit comments to TMS Team | All units, concerned; | NLT 10 days after request for comments |
| Consolidate comments & provide ASL-33 a smooth draft of proposed changes. | TMS Team | NLT 5 days after request for comments |
| Release RMC Standards Change Recommendation | ASL-33 | NLT 10 days after request for comments |
| Review Proposed Change & Provide Concurrence/Non-Concurrence with justification | Wings, MARFORs DC AVN (ASL-1) | NLT 10 days after release of change recommendation msg |
| Announce Interim Approval | ASL-33 | ASAP Upon Wing, MARFOR, and ASL-1 Concurrence |
| Administrative Review | ASL-33 | ASAP Upon Wing, MARFOR, and ASL-1 Concurrence |
| Obtain ASL-1 Signature & Publish as Standards Change | ASL-33 | ASAP Upon ASL-1 Concurrence |

Figure 3.2. Required Maintainer Competency (RMC) Standards Change Timeline

e. Advanced Skills Management (ASM). ASM is a centrally hosted Web-centric tool that will allow for management of the workforce

globally and in real-time. It will improve the quality and efficiency of training, in the classroom and in the fleet, by providing the capability to identify individual maintenance task requirements, perform real-time assessments, identify training deficiencies and access training tools. ASM shall be used as the authorized data source to fill in the appropriate RMC scorecards until such time that that information can be imported directly from ASM to Marine Aviation Commander's Current Readiness Assessment Too.

(1) ASM offers a common framework for the training development planning of an individual within the unit in support of unit requirements and tracking qualified and proficient personnel. As demonstrated, organizations have sufficient flexibility to define how the ASM system is used including data ownership, external system interfaces, roles and responsibilities and sources for training data (i.e. PQS or T&R). The ability to develop both localized training and also leverage off of the training programs, or assessments developed by others introduces the potential for additional efficiencies. The ability to locate, and if required re-assign, qualified and proficient personnel is critical in today's high op-tempo environment, and is frequently done in ASM. The ability for managers to understand exactly how personnel came to be qualified has reduced the tendency to suspend, and then re-qualify personnel when they transition to new organizations. Providing a mechanism for incorporating new training technologies directly into key personnel training syllabi is a major benefit which is just beginning to be utilized.

(2) Efforts to reduce manpower and utilize existing resources more efficiently require organizations to develop and accurately identify personnel with very specific qualifications. The ability to both locate and possibly re-assign these highly skilled personnel from throughout the work force is critical. Managers must have accurate, up-to-date information describing in detail the qualifications and proficiency of their personnel. The system capabilities are tailored to organizational requirements. Unique accreditation titles reflect the number of individual training syllabi which result in a qualification, certification, or license. Accreditations can be simple training evolutions, such as respirator qualification, or they can be extensive training programs such as Plane Captain taking months to complete. Accreditations held include the total number of accreditations held by personnel within an organization. This number varies considerably between organizations based on the organizations unique requirements. Within aviation organizational maintenance, personnel may hold, on average, 20 unique accreditations.

(3) Organizations may also use ASM to track, either automatically or manually, on-the-job Training (OJT). In aviation maintenance, the Naval Aviation Logistics Command Operating Maintenance Information System (NALCOMIS) provides a key interface to ASM and greatly enhances the system's ability to monitor personnel proficiency. The NALCOMIS system tracks, among other things, aircraft maintenance actions. This automatic interface with ASM allows

individuals and their organizations to keep accurate records related to personnel proficiency, and to credit individuals with OJT that may be required to attain (or keep active) an accreditation. It also relieves personnel of the burdensome task of manually entering required OJT into their training records, resulting in a considerable time savings.

(4) ASM data includes the duration (start and end dates) for personnel who complete a training program and obtain an accreditation. This data is available for every individual who earns an accreditation and can be averaged in a statistically significant manner. Data may also include personnel projected rotation dates (PRDs) as well as information related to the desired number of personnel with a particular skill set (accreditation). With this information, it is possible to not only determine when a skill will be lost (based on the PRD) but to estimate when, and how many personnel need to begin training to mitigate the future loss of proficient personnel. This capability helps to further address challenges associated with scheduling/ resources.

6. Flight Line Aircraft Availability

a. Purpose. The NAE Flight Line Availability panel, depicted in Figure 3.1, shows the number of squadrons that meet their Flightline Availability goal (green), are within 20% of their Flightline Availability goal (yellow), and are greater than 20% under their Flightline Availability goal (red).

b. Flightline Availability. Flightline Availability is measured against the Flightline Requirement (PMAA unless otherwise directed by DCA). This metric is measured at the squadron level and is a KPI. The legacy Flight Line Availability appears on the legacy RFT panel.

c. Flightline Gap. A gap between the Flightline Requirement and Flightline Availability has an impact on RBA and RFT. While there is a not a one-to-one correlation between Flightline Gap and RBA/RFT Gap, large Flightline Gaps can be detrimental and can have identifiable impacts on RBA/RFT.

7. Ready For Tasking (RFT) Aircraft Availability (Goal 75% of PMAA)

a. Purpose. The NAE RFT Availability panel, depicted in Figure 3.1, shows the number of squadrons that meet their RFT goal (green), are within 20% of their RFT goal (yellow), and are greater than 20% under their RFT goal (red). This metric is measured at the unit level and is a KPI. The legacy RFT Availability panel provides a consolidated average status of RFT Sets, Assigned aircraft, Flightline aircraft, and RBA available in a TMS compared to the required RFT Sets, Flightline, and RBA identified in the TMS Readiness Standards. This metric is measured at the unit level and is used to provide the TMS Lead a more detailed look at RFT. This panel should be used as a starting point to identify equipment readiness trends.

b. Ready For Tasking (RFT) Requirement (Goal 75% of PMAA). Requirements are based on the number of RFT Mission Sets required to support flying hours, aircrew training during contingency and deployment, and are codified in the TMS standards.

c. Mission Systems and Sets (MS). MS and Mission Sets are integrated aircraft components, or groups of components, and non-integrated "bolt on" equipment/systems necessary to complete T&R sorties. Integrated aircraft components are generally described as MS and non-integrated equipment are described as Mission Sets. Standards for MS and Sets are determined by the TMS Team and approved by HQMC.

d. Ready For Tasking (RFT) Availability. A calculated number based on the availability of Ready Basic Aircraft and Ready MS/Sets measured against requirements as defined in the TMS Readiness standards.

e. Ready For Tasking (RFT) Gap Closure Goals. The TMS Team's ultimate goal should be to close the RFT gap to zero; however, a realistic annual gap closure goal may not achieve this. Guidance for formulating annual goals will be provided by HQMC prior to submission.

f. Ready Basic Aircraft (RBA) Requirement (Goal 75% of PMAA). RBA is the term used to describe a MC aircraft that is functional check flight (FCF) complete, capable of day or night Integrated Maintenance Concept flight, and has the necessary operational communication, Identification, Friend or Foe, navigation, flight, and safety systems required by applicable NATOPS and FAA regulations. Non-RBA consists of four categories: Non-Mission Capable Maintenance (NMCM), NMCS, Mission Capable Non-RBA (MCNRBA) and Out of Reporting. RBA is a MC aircraft with no "L" or "Z" Equipment Operational Capability (EOC) discrepancies that is FCF complete.

g. Marine Corps Aviation Plan (AVPLAN) Ready Basic Aircraft (RBA). Starting in the FY15 Marine Corps Aviation Plan (AVPLAN), DCA directed that a determination be made as to the minimum number of RBA aircraft, by TMS, required, on a daily basis, to meet a T-Rating of 2.0. This AVPLAN RBA is an interim goal towards meeting the NAE RBA goal of 75% PMAA. While AVPLAN RBA is used in the DCA's Readiness Briefs and Focus Area Charts, it is not used in the NAE Briefing Cycle.

h. Ready Basic Aircraft (RBA) Calculations. RBA is calculated on a monthly basis by averaging the actual daily RBA reported in the Aircraft Material/Supply Readiness Reporting Web Tool (AMSRRWeb) then comparing that to the RBA standard (75% PMAA). If there is a shortage of RBA in the squadron, a deficit or gap is calculated. The calculation is done at the squadron level. The following items support the calculations:

| Term | Meaning |
|-------------------|--|
| RBA Available | Average Daily RBA |
| Average Daily RBA | The sum of the Daily Total RBA divided by the number (#) of reporting days in the month. |
| RBA Standard | 75% of the Flight Line Requirement (PMAA). |
| RBA Deficit (Gap) | The difference between the RBA standard and the RBA available for each reporting unit. This is measured at the squadron/detachment level and aggregated at the MAG (TMS Team) level. |
| Gap Goal | A TMS Team submitted, HQMC approved, number used to provide a challenging yet achievable readiness improvement from the previous fiscal year (FY). |

Figure 3.3. Ready Basic Aircraft (RBA) Definitions

i. Ready For Tasking (RFT) Calculations. RFT is calculated at the squadron level in accordance with the BFM and then compared to the RFT standard (75% PMAA). If there is a shortage of RFT in the squadron, a deficit or gap is calculated. The following items support the calculation:

| Term | Meaning |
|----------------------------------|---|
| Flight Line Standard | Primary Mission Aircraft Authorized (PMAA) for each squadron |
| Assigned Mission System Standard | The number of assigned systems, integral or separate from the aircraft to support the Ready MS Requirement, a HQMC approved number. |
| RFT Standard | The required number of RBA coupled with MS to support the operational commitment phase. (75% of PMAA) |
| Ready Mission Systems Standard | The required number of integral or separate systems required to support the operational commitment phase. A HQMC approved number. |

Figure 3.4. Ready For Tasking (RFT) Standards Definitions

Note: A review of the value of using RBA/RFT versus FMC/MC as the key determinant of readiness is on-going. RBA/RFT is currently being used internal to the Navy and Marine Corps to discuss readiness, and MC/FMC is being used externally for funding discussions.

8. Aircraft Life Management (ALM)

a. Purpose. The ALM chart depicts the current status of a TMS with regard to aircraft utilization for the current population of aircraft for that TMS. Proper management of aircraft utilization ensures that airframes last their intended Service Life by managing airframe usage within acceptable range of life limiting parameters.

b. Aircraft Life Management (ALM) Measurement. ALM is measured by the total number of flight hours, fatigue life expended, total life index, cats/traps, field landings, or other life-limiting factors of an aircraft as published by NAVAIR 4.3.3 in the NAVAIR 13120 and 13130 Instructions or applicable Periodic Maintenance Information Card or WSPD. A model for each TMS aircraft is developed that spreads the total expenditure allowed over the programmed life of the aircraft. The model has an optimal expenditure rate and a total of three zones as categorized by this metric. Aircraft that are utilized close to or below the nominal line are considered within normal limits; larger utilization deviations in excess of the optimal rate result in the aircraft to be in zones indicating moderate to severe over utilization relative to each aircraft's age.

c. Calculations

(1) Green = In Limits. Aircraft properly utilized and projected to fall within 12 months of or exceed projected retirement or transition date, or are within 10% of a published aircraft utilization rate.

(2) Yellow = Outside Limits. Aircraft over utilized and projected to fall short of projected retirement or transition date by 12-24 months, or are exceeding a published aircraft utilization rate by 10-20%.

(3) Red Above = Outside Limits. Aircraft over utilized and projected to fall short of projected retirement or transition date by more than 24 months, or are exceeding a published aircraft utilization rate by greater than 20%.

d. Analysis. The goal for this metric is to assist with managing pre-determined aircraft utilization limits and achievement of Service Life requirements. As more aircraft migrate into the Yellow and Red (over utilized), the requirement for significant measures to be taken to manage aircraft to meet retirement or transition increases. Significant measures may include the following actions: reduce the current rate of utilization (reduce flight hours, restrict certain types of flying), extend the life-limiting parameter, accelerate the introduction of the follow-on aircraft, and transfer aircraft across units to extend the remaining life.

9. Cost Performance

a. Purpose. The Cost Per Hour chart compares cost per flight hour performance against the OP-20 Budget.

b. Naval Aviation Enterprise (NAE) Chief Financial Officer. The NAE has established a CFO and a CFO Board of Directors (BOD) in order to better track requirements, resourcing and execution of Naval Aviation's readiness accounts and provide the NAE leadership analysis

and recommendations designed to optimize NAE readiness resources to deliver current and future readiness within Naval Aviation.

b. Measurements. Cost Performance Measurements are shown on the KPI slide as meatballs, as depicted on Figure 3.1. Cost performance meatballs are defined as:

For CPI and SPI:

- Green - 0.95 to 1.05
 - Yellow - 0.90 to 0.949; 1.051 to 1.10
 - Red - 0.00 to 0.89; 1.11 and above
- For EI:
- Green - 0.95 to 1.00
 - Yellow - 0.90 to 0.949
 - Red - 0.00 to 0.89

There is one meatball for each of the following:

(1) Cost Performance Index (CPI). CPI is depicted by the CPI meatball, second from left meatball on the KPI slide, and bottom left panel on the Cost Performance chart (Figure 4.5) in the backup slides. CPI highlights the EV by comparing budgeted costs for AVDLR, fuel, consumables, contracts in relation with hours flown with the actual costs. It is used as an indicator how close the Op20 budgeted cost per hour is to actual costs. A CPI greater than 1.0 indicates that the current year actual costs per hour are less than the budget.

(2) Schedule Performance Index (SPI). SPI is depicted by the SPI meatball, far left meatball on the KPI slide, and top right panel on the Cost Performance chart (Figure 4.5) in the backup slides. SPI highlights the EV of the hours flown and compares these costs to the budgeted or planned costs. The SPI index also indicates the deviation of actual hours flown to the plan. A SPI greater than 1.0 indicates that the TMS is flying more hours than planned.

(3) Execution Index (EI). EI is depicted by the EI meatball, second meatball from the right on the KPI slide, and bottom right panel on the Cost Performance chart (Figure 4.5) in the backup slides. EI highlights the current year costs for repairables (AVDLR), consumables (AFM), and contracts (FW) as compared to the average prior two year cost, year-to-date. This chart shows if the TMS costs are greater/less than prior year execution. An EI greater than 1.0 indicates the TMS is operating at a lower cost per hour than the previous 2 year average Aviation Operations and Maintenance (AOM).

(4) Aviation Financial Analyst Support Tool (AFAST) Price Index (API). API is depicted by the API meatball, far right meatball on the KPI slide. API is the current year price change in AVDLR and AFM from the previous 2 year rate(s) as provided by NAVSUP and DLA. It measures aggregated price variances from Market Basket escalation with current year (using AFAST Price Index Rate to apply escalation costs of previous 2 years). An index greater than 1.00 = actual rates

are less than forecasted in the market basket; and less than 1.00 = actual rates are greater than forecasted. The aggregate of this is defined as price and is expressed as an index.

c. Cost Performance Chart. This KPI chart, bottom left panel on the Cost Performance chart (Figure 4.5) in the backup slides, measures the monthly and FY to date total cost per flight hour, breaking out each of the cost components, AFM, AVDLR, Fuel and Contracts, as a per flight hour cost. Cost information is derived from the ACES cost tool.

d. Headquarters Marine Corps (HQMC) Cost Guidance. The following is HQMC's guidance on focus areas with regards to cost:

(1) At the TMS level, the focus of effort is on the EI and SPI. (See Appendix A for additional information and guidance)

(2) While the TMS Team cannot directly impact the OP-20 budget process, they need to understand the process and its drivers, to understand and articulate the impact to the TMS. The MAW/MARFOR should facilitate this process.

(3) The Cost Gap Analysis chart detailed in Appendix B will be used to explain why cost and schedule performance (EI and SPI) at the TMS level, ACI at the NAVSUP level, and CPI at the MARFOR and Wing level, is green, yellow or red, and shall be developed as part of each TMS Team's monthly battle rhythm reporting.

(4) Each TMS will submit their Cost Gap Analysis chart per the schedule in effect, which is promulgated separately.

e. Cost Analysis Team. A four tiered CAT is designed to provide integrated, full-spectrum cost visibility, analysis, and counsel to TMS Team Leads to more effectively manage cost elements. Detailed information on CAT processes, composition, and roles and responsibilities is contained in Appendix B. The following are benefits derived from effective use of the CAT:

(1) Empowers TMS Logistics Lead as the TMS cost voice/ expert

(2) Provides monthly detailed cost explanations, expertise and visibility in direct support of each TMS Lead and Team

(3) Provides standardization within and between TMS Teams, MAWs and MARFORs

(4) Integrates cost-related SME's into the CR process and aligns their responsibilities to best support TMS Team battle rhythms

f. CNAP/CNAF sponsored Logistics Cost War Rooms (LCWRs). LCWRs are:

(1) Scheduled on approximately a semi-annual basis to complement TMS Teams' NAE briefing cycles and support USMC CR Strategic goals.

(2) Designed to ensure the Logistics Leads can:

(a) Proactively engage at the right level.

(b) Review and analyze AIs & Workbooks prior to the telcon.

(c) Establishment of a robust feedback loop with HQMC and CNAP/CNAF.

(3) Most effective when fully supported. MARFORs/Wings shall ensure designated LCWR participants are available for all scheduled LCWR meetings.

(4) Located on the CNAF N422 Sharepoint site:

<https://cpf.navy.deps.mil/sites/cnap/N42/N422/AFAST/cwrM/default.aspx>

g. Cost Management. Like all enterprises, Naval Aviation must meet mission requirements within budget and resource allocations. Understanding cost drivers also has a direct relationship to the efficient generation of readiness. The Cost Management philosophy for Marine Aviation CR will include better decision support to eliminate waste and non-value added activity, improve supporting efforts and best practices, reduce variability in quality and methods between units, improve purchasing decisions for equipment end items and bit/piece support, and incorporate best business practices within, and across, Marine Aviation and the NAE.

(1) Tools. Marine Aviation shall use available tools and existing venues (such as the TYCOM-supported Logistics Cost War Room) to improve understanding of cost drivers, and improve cost reporting accuracy. These tools include ACES, AFAST, Buffer Management Tool, and ELAT to identify and target readiness opportunities. Additionally, a CAT will be tethered to each TMS Lead and will function as a direct-support advisory group chaired by the Lead MALS CO. The MALS Logistics Lead, working with Tier 1 members, provides day-to-day interface with the TMS Team, baselines cost assessments, flushes out cost issues, and chairs Cost Group meetings (held in conjunction with TMS Team meetings).

(2) Cost SMEs. TMS Teams, as process owners, are able to leverage existing resources to gain full-spectrum cost visibility by better integrating cost-related SME's into the CR process. This will support the TMS Team battle rhythm, ensure a stratified level of effort and expertise (Tiers 1-4), and lend itself for a more comprehensive and integrated cost management process while laying the foundation for a defined "insertion point" for MAW & MARFOR Comptrollers.

10. Aircraft Status Dashboard and Sustainment Metrics. The Aircraft Status Dashboard (ASD), Sustainment Trends, and Sustainment metrics, depicted in Figures 3.5, 3.6, and 3.7 are data products designed to provide insight into the current and recent past of a TMS governed through the EM&SCM. The EM&SCM manages the configuration of all specific Sustainment metrics and reviews all recommended changes to the metrics. Once the updated metric is reviewed by the Navy and the Marine Corps through their individual processes and approved by the EM&SCM Executive Leadership Committee, it goes to the EXCOMM for final approval. The ASD can be found at <https://inform.navair.navy.mil/asd/#>

TMS Aircraft Status Dashboard

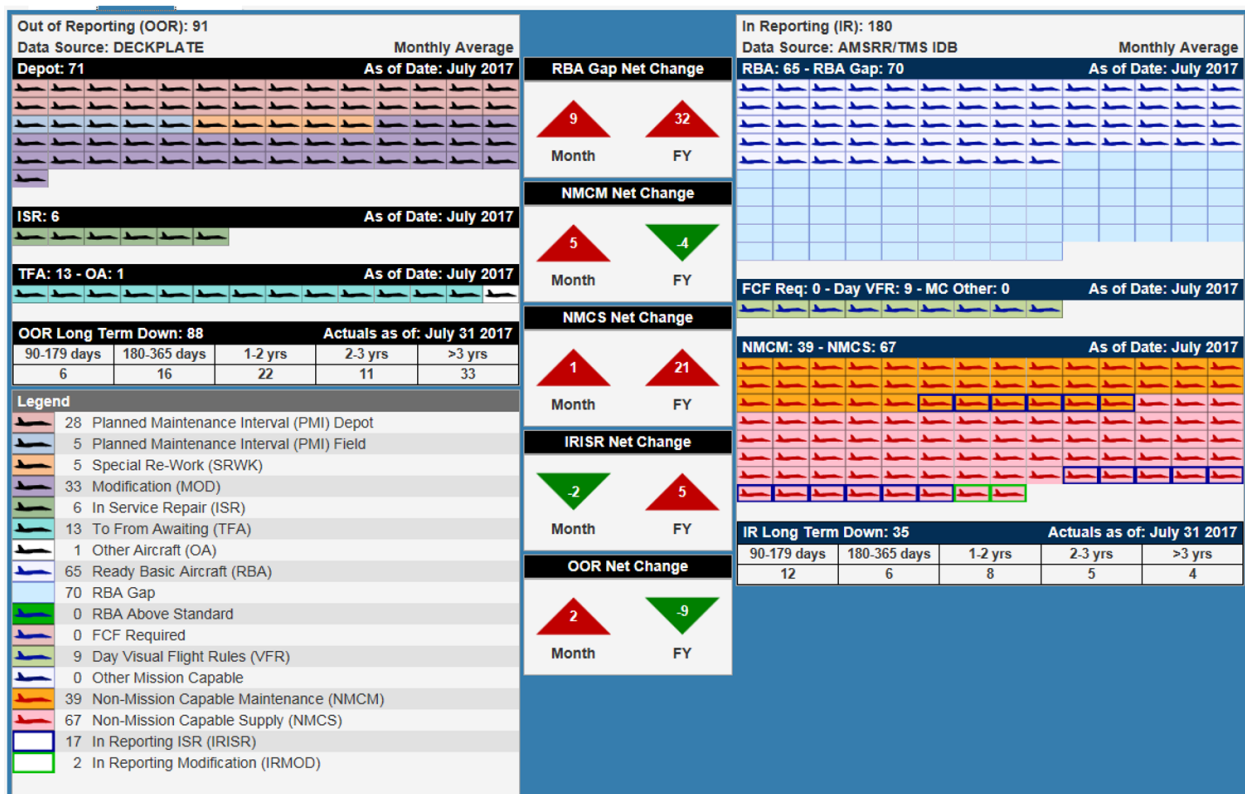


Figure 3.5 Aircraft Status Dashboard

a. Aircraft Status Dashboard (ASD). The ASD is managed by NAVAIR 6.8 and is composed of three parts:

(1) Depot. The left-hand side of the ASD shows number of aircraft in Depot-level events, including Planned Maintenance Interval (PMI) inspections (1 and 2), non-concurrent In-Service Repairs (ISR) [over 120 days], modifications, etc. The data is provided by COMFRC and is based on a snapshot on a given day of the month from DECKPLATE.

(2) Non-Depot. The right-hand side of the ASD shows the number of RBA Fit aircraft, the RBA gap, the number of NMCS and NMCM aircraft, and the number of Mission Capable Non-RBA (MCNRBA) aircraft. The data is provided by CNAL and is based on a monthly average from AMSRR data.

(3) Transition. The center section of the ASD shows the net change aircraft from left to right (depot work completed) and from right to left (depot inductions).

Note - Because of the difference in data sources (DECKPLATE and AMSRR), the sum of the right and left sides of the chart do not equal the total aircraft inventory. Also, ISRs requiring less than 120 days of work are reflected in the Non-Depot (right) side of the ASD currently under NMCS/NMCM, but may eventually be shown as Non-Mission Capable - Depot.

* BFM's are located on the NAE SharePoint site at https://usff.navy.deps.mil/sites/nae/current_readiness/NAECRBFMs/SitePages/Home.aspx

TMS Sustainment Trends

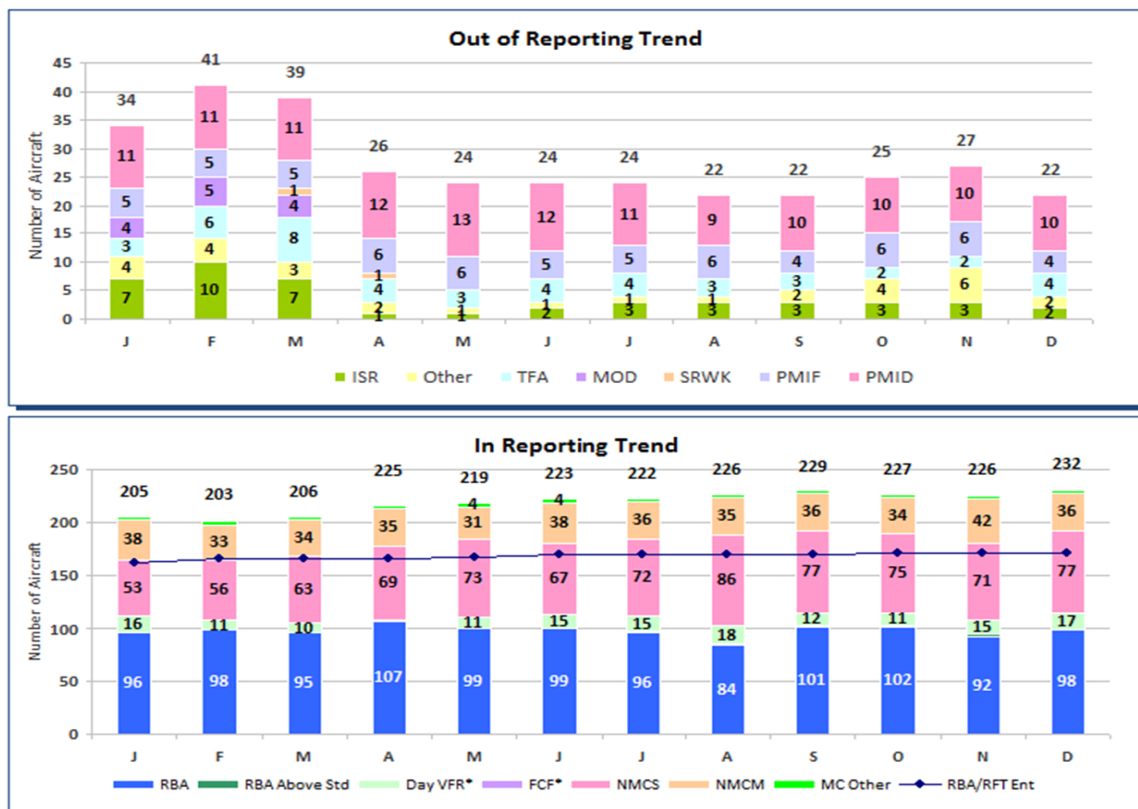


Figure 3.6 Sustainment Trends

b. Sustainment Trends. (Figure 3.6) The Sustainment Trend slides, which were previously part of the Sustainment Metrics (Figure 3.7), show the OOR Trend for In-Service Repairs (ISRs), To/From/Awaiting (TFA), Modifications (MODs), Special Rework, Planned Maintenance Interval - Field (PMIF), Planned Maintenance Interval - Depot (PMID), and Other and the In Reporting Trend for RBA, RBA Above Standard, Day VFR, Functional Check Flight (FCF), NMCS, NMCM, and MC Other.

c. Sustainment Metrics. The Sustainment metrics, shown in Figure 3.6, are a series of four panels designed to show twelve months of sustainment trends for a specific TMS. TMS Leads should be familiar with the top-level impact of the trends identified in each of the panels. The Panel owners will support the TMS Lead in a more detailed drill-down of the panel. The four panels on the Sustainment metrics chart are:

TMS Sustainment KPIs

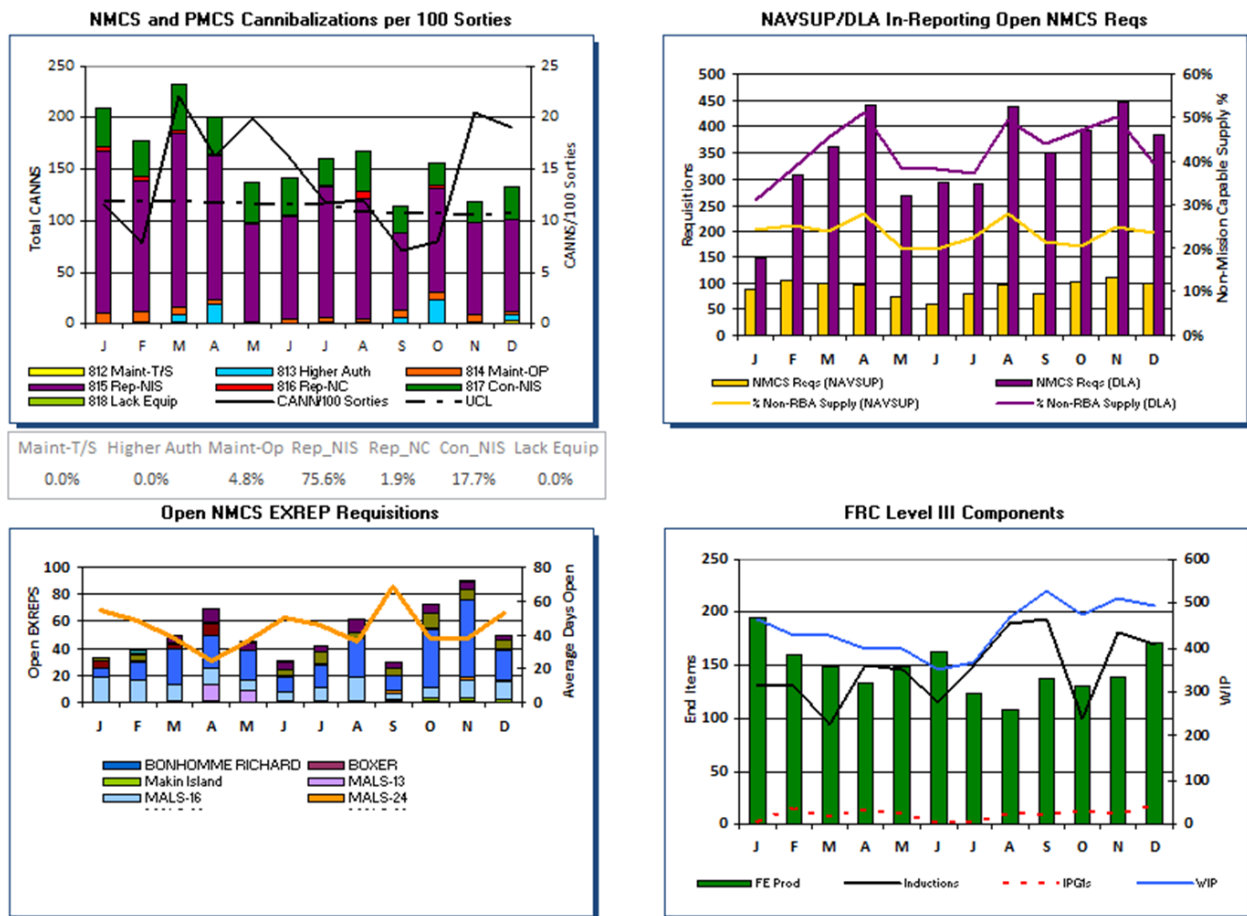


Figure 3.7 Sustainment Metrics

(1) Cannibalizations/100 Sorties. Information in this panel is provided by CNAL maintenance. This panel provides a visual depiction of the twelve month trend for monthly cannibalizations (CANNS). It breaks down the reason for the CANNS, and it has a black solid line showing the number of CANNS per 100 sorties and a black dashed line showing the twelve-month rolling average for CANNS.

(2) Open Non-Mission Capable Supply (NMCS) Expeditious Repair Requisitions. Information in this panel is provided by COMFRC. This panel provides a visual depiction of the twelve month trend for monthly expeditious repairs. The information is broken down by Level II repair site, and there is an orange solid line showing the average number of days to complete the repair.

(3) Naval Supply Systems Command (NAVSUP)/Defense Logistics Agency (DLA) In-Reporting Open Non-Mission Capable Supply (NMCS) Reqs. Information in this panel is provided by NAVSUP WSS and DLA. This panel provides a visual depiction of the twelve month trend for monthly in-reporting, open, NMCS requisitions for both NAVSUP WSS and DLA. There is also a green dashed line showing the percent Non-RBA goal, and separate solid lines (yellow - NAVSUP/purple - DLA) showing percent non-RBA (Supply) for both NAVSUP WSS and DLA.

(4) Fleet Readiness Center (FRC) Level III Components. Information in this panel is provided by COMFRC. This panel provides a visual depiction of the twelve month trend for monthly FRC Level III component repair. In addition to showing where the components are produced, there is a black solid line depicting inductions, a blue solid line showing WIP, and an orange dashed line showing Issue Priority Group 1s.

11. Analysis

a. Purpose. The purpose of metrics analysis is to identify the performance gaps (the difference between entitlement/requirement and actual performance) and identify the root cause(s), to maintain and sustain Core Capable Units.

b. Responsibility for Analysis. Metrics analysis takes place within several levels of the TMS structure. Analysis is provided by the squadron Operations and Maintenance departments, the CR Analysts, and the TMS Team membership. Generally recognized Continuous Process Improvement (CPI) tools and methodologies are used to improve the underlying processes, remove barriers, and close performance gap(s).

c. Data Sources. Through the use of tier 2-4 drill down charts, and reports collected via Aircraft Inventory Readiness and Reporting System, DECKPLATE, Optimized-Organizational Maintenance Activity, AFAST, M-SHARP, and other data sources addressed within the BFMs, root cause analysis capabilities are enhanced.

d. Root Cause Analysis. Root cause analysis furthers the TMS Teams' efforts in the development of action plan detailing the gap closure efforts and time line.

12. Monthly Analysis Summary Process

a. Overview. Adherence to the prescribed readiness level described in the AVPLAN is a principal outcome of a successful MAW. Key to this effort is the availability of RFT sets, appropriate levels of aircrew staffing and training, and properly staffed units. Regular review of KPIs and supporting metrics by the TMS Team is essential to the success of the on-going process improvement effort (see Chapter 3, Section 3 for a comprehensive overview of CR KPIs). To the degree that identified gaps are critical, the RS&P or EM&SCM may require a TMS Team, not otherwise scheduled for a CR CFT VTC in that month, to participate in the CR CFT VTC to address the critical TMS gaps.

b. Marine Corps Monthly Ready For Tasking (RFT) Gap Analysis. Figure 4.4 is an example of the Monthly RFT Gap Analysis. This analysis tool provides the TMS team with a method to describe any RFT gaps, causal factors, and actions being taken to reduce gaps. Slide 2 (not depicted) of the Monthly RFT Gap Analysis is a detailed word picture and includes RBA and RFT Gap Details, Top Degraders, RFT Gap Sub-system Capability Impact Reporting Drivers, Mission System Gaps, Negative Impacts, Projections, etc. As needed to describe the Gap. Descriptions of the panels are below:

(1) Upper Left Quad

(a) Contains two measures: RFT Gap for current month and previous two months with three month average.

(b) Source: CR IDB.

(2) Upper Right Quad

(a) Contains three measures: Flt Line Deficit, RBA Deficit, and MS Deficits with three month average.

(b) Source: CR IDB.

(c) The MS breakout in the Right Quad is a "stand alone" representation. Values charted will not sum or equate to RFT gap values. All MS are charted separately for each TMS.

(3) Lower Left Quad

(a) Contains "root cause" amplifying comments in reference to units and deficits represented in Upper Right section of Quad chart.

(b) Includes comments regarding FL Deficit, RBA Deficit, and Mission System Deficits impacted by particular systems, components, and scheduled/unscheduled maintenance, as appropriate.

(4) Lower Right Quad

(a) Notes related to "Actions Items" (AI lead, milestones, completion dates, timelines) should be included in this section of the Quad chart (source: TMS Readiness Analysts).

(b) "Assistance Required" is an avenue for the TMS Team to ask for assistance on issues that fall outside the TMS domain or on issues that the TMS feels would be applicable to all TMSs and could/should be addressed on a global level. This should be included on all charts - if there is no assistance required then simply state "none."

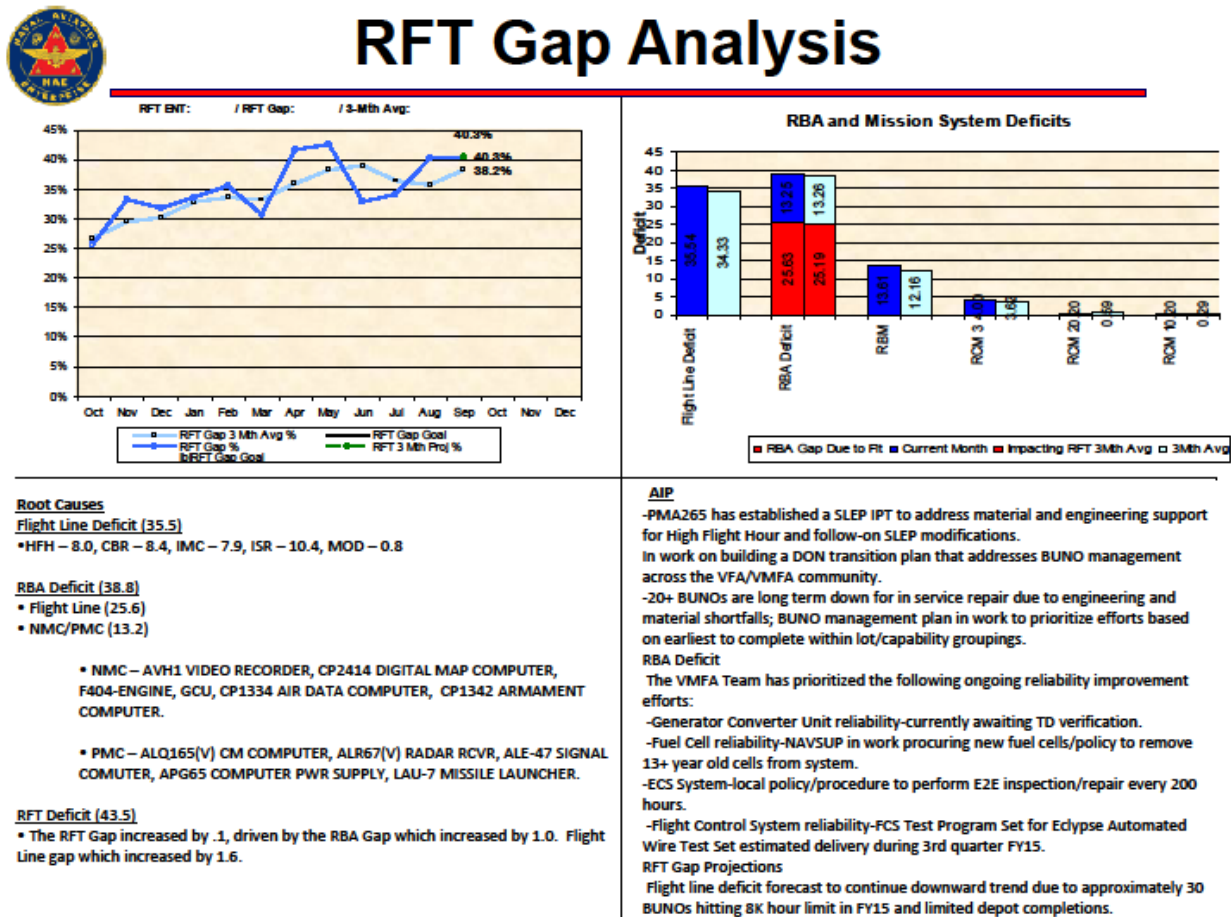


Figure 3.8. Monthly Analysis Summary: Ready For Tasking (RFT)

c. Marine Corps Monthly Cost Performance Analysis. (Figure 4.5) Each TMS is responsible to provide, monthly, an analysis of their

ACES/AFAST costs. Earned Value Management (EVM) techniques are employed to measure cost and schedule, to compare actual execution of cost with budgets (i.e. Op20 Flying Hour Program budget), and to analyze performance indices in an effort to identify problem areas for in-depth review.

(1) The standardized TMS CpCs align Marine Corps and Navy TMS teams to improve the quality of cost analysis briefed to NAE leadership at the TRW, CR CFT, and NAE Air Boards. The cost charts provide a standardized format to display relevant CPI, SPI and EI information that will facilitate TMS teams in explaining their programs' execution.

(2) The BFM for the ACES TMS CpCs and EVM acronyms are defined in the ACES CpC BFM. For those TMS's costs not reported in ACES, the data will be extracted from AFAST. The ACES cost charts are updated monthly and posted in the NAE SharePoint and will be used to explain and justify the reasons the indices are "yellow" or "red" during NAE Briefings. The Green/Yellow/Red criteria may differ between TMS and is listed in the ACES CpC BFM. Analysts use AFAST/ACES/LCWR tools to identify root causes, determine the underlying factors, and provide quantitative insight on drivers and their effects on schedule, cost, and execution performance metrics (SPI, CPI, EI).

(a) Schedule Performance Index Chart. The SPI chart in upper right quadrant highlights the EV of the hours flown and compares these costs to the budgeted or planned costs. The SPI index also indicates the deviation of actual hours flown to the plan. A SPI greater than 1.0 indicates that the TMS is flying more hours than planned.

(b) Cost Performance Index (CPI) Chart. The CPI chart in the lower left quadrant highlights the EV by comparing budgeted costs for AVDLR, fuel, consumables, and contracts in relation to hours flown with the actual costs. It is used as an indicator how close the Op20 budgeted cost per hour is to actual costs. A CPI greater than 1.0 indicates that the current year actual costs per hour are less than the budget.

(c) Execution Index Chart. The EI chart in lower right quadrant highlights the AVDLR, consumables, and the contract's (AOM) current year costs compared to the average prior two years overall cost. This chart shows if the TMS costs are greater/less than prior year execution. An EI greater than 1.0 indicates the TMS is operating at a lower cost per hour than the previous two year average AOM.

(d) Cost Performance. This KPI panel, top left panel on the Cost Performance chart (Figure 4.5) in the backup slides, measures the monthly and FY to date total cost per flight hour, breaking out each of the cost components, AFM, AVDLR, Fuel, and contracts, as a per flight hour cost. Cost information is derived from the ACES cost tool.

(e) Cost Chart Goals. Each monthly SPI, CPI, EI chart should address the cost and schedule performance concerns and assigned goals of the TMS. The current Strategic Guidance is focused on reducing the cost per flying hour (CPH). Cost reduction goals have been set forth in strategic guidance. The TMS analyst is responsible to document the monthly cost chart root cause analysis in the lower right of the quad chart below. The documentation should address (but not limited to) the following as applicable:

1. Use Cause and Effect Diagrams to identify issues for TOP cost and cost change drivers.

2. Highlight main cost drivers and what metrics they specifically affect.

3. Assign Barrier Removal Teams to work on corrective actions for issues identified. Explain deviations for each indices and why actual deviations from plan. Is there AVDLR or AFM consumption issues? Are current prices greater than the Annual Price Change (APC) used for current year costing?

4. Flying hour plan up to date?

5. Mission tasking met? FRP cycle? Operational factors or other cyclic events impacting the indices.

6. Rate or cost variances/deviations from the Op20 for fuel, AVDLR, consumables, and contracts

7. Explain the magnitude that the largest cost drivers have on the EV formulas. How many points from EV goal are attributed to AFM, AVDLR, AFM or FW?

8. History: Compared to previous FY

9. Trend Analysis: What does the last several months' data show? Where is the trend going for each index?

10. Perform analysis of the last several months' data. Explain why the CPI/SPI/EI is trending up or down.

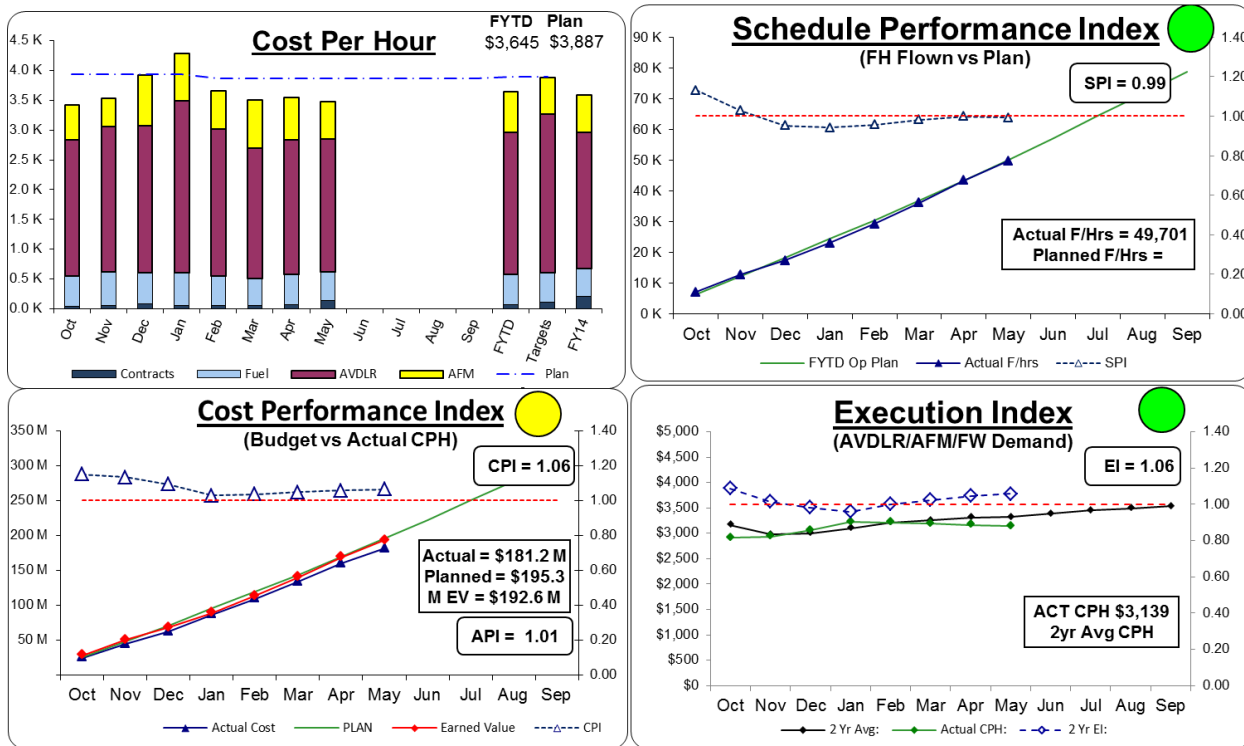
11. What events have affected the metrics, what budget issues are there?

12. Corrective Actions: What is being done to correct deficiencies? Highlight pending problems or events that will affect your future metrics. Specifically provide in-depth analysis of issues that pushed CPI/SPI/EI into the Yellow/Red region.

13. Particular maintenance and supply actions and/or policies that drove increased obligations. Justification for contract

costs that were above what is in the approved planned budget Escalate issues and share, with CR CFT, items requiring external assistance.

Naval Aviation Cost Performance



UNCLASSIFIED

Figure 3.9. Monthly Analysis Summary: Cost Performance

13. Changes. In the dynamic field of Naval and Marine Corps Aviation, requirements change based on evolving missions sets, aircraft and system modifications, and how the Marine Corps responds to emerging missions and tasks. If a component described in the original BFM or the numerical requirements outlined in the TMS Standard has changed, the TMS Team will recommend commensurate changes to more accurately present the metric in the USMC KPIs (Figure 4.5). Recommended changes from any TMS Team to existing metrics (not including the RMC Standards) or any requests to add or delete metrics shall first be vetted through the MCCB. The MCCB was established to function as a metrics advisory group to the RLT and MAERB. The MCCB serves as the clearinghouse to the RLT by systematically reviewing all metrics to ensure effective incorporation into Marine Aviation CR program.). The MAERB may delegate approval or rejection authority to the RLT.

Chapter 4

Marine Corps Current Readiness Briefing Requirements

1. Introduction. To support the TMS Teams' efforts in closing readiness gaps, realizing operations effectiveness, and optimizing readiness performance, the NAE uses a structured, progressive briefing cycle that each TMS Team accomplishes each year. These briefs include the TRW, MAERB, CR CFT, the NAE Air Board, the O&S Cost Deep Dive, and the Mid-Cycle Review. Additional briefs may be required on an as needed basis to inform Marine Corps and NAE leadership on specific issues or AIs, as directed.

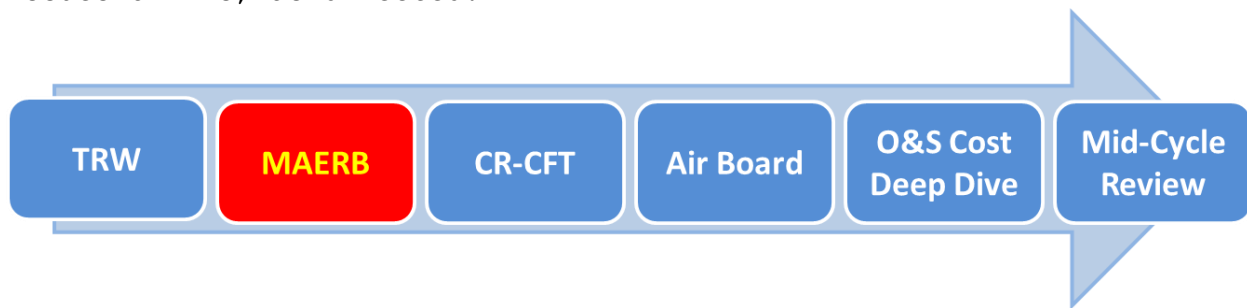


Figure 4.1. Briefing Overview

2. Purpose. The Naval Aviation Enterprise (NAE) briefing processes is designed to focus on key readiness degraders and cost reduction initiatives. The ultimate goal is to focus exclusively on those issues directly affecting readiness and cost and to streamline or eliminate any peripheral issues. The TRW, CR CFT, MAERB, Air Board, O&S Cost Deep Dive, and Mid-Cycle Review briefs should focus on data driven identification of issues and their resolution. Providing periodic status reports to the MAERB, CR CFT, and the NAE Air Board is essential to enable the appropriate elements of the NAE to provide the TMS Team with assistance in removing barriers to achieving required readiness and efficiency goals. The workshop and briefs also provide the opportunity for the TMS Teams to share successes for other Teams to consider or emulate. The TMS Team lead MAG is responsible for the content of the briefs with the assistance and participation from providers such as PMA, NAVSUP WSS, DLA-A, the TYCOM, and other applicable providers. Briefs should be conducted by the appropriate TMS Lead, Co-Lead, PMA, or Action Officer.

3. Communications. TMS Teams will prepare and brief their respective community status at the RLT (as needed), TRW, MAERB, CR CFT, the NAE Air Board, the O&S Cost Deep Dive, and Mid-Cycle Review briefs. The KPIs displayed in the TMS Team Top KPI Chart (Chapter 3) are an essential element to each level of the NAE briefing process. The TRW, MAERB, CR CFT, Air Board, O&S Cost Deep Dive, and Mid-Cycle Review briefs should be conducted by the appropriate TMS Lead or Co-Lead. Briefs to the RLT can be conducted by the TMS Lead or by an appropriate Action Officer such as the CR AO or Logistics Lead. TMS briefers should be conversant in the factors that drive the KPIs and

the issues being presented. Standard brief templates are posted on the NAE SharePoint site at:

https://usff.portal.navy.mil/sites/NAE/current_readiness/Example%20TRW%20CR%20CFTAIRBoard%20Briefing%20Material/Forms/AllItems.aspx








| RLT Readiness Leadership Team | TRW TMS Readiness Workshop | MAERB Marine Aviation Executive Readiness Board | CR CFT Current Readiness Cross-Functional Team | NAE Air Board Naval Aviation Enterprise Air Board | O&S Cost Deep Dive Operations and Support Cost Deep Dive EXCOMM | NAE Air Board Mid-Cycle Review |
|---|---|--|--|---|--|--|
|  |  |  |  |  |  |  |
| Chaired by MARFORCOM | CO-Chaired by ASL and CNAL | Chaired by ADCA(S) | Co-Chaired by ADCA(S) & CNAL | Co-Chaired by CNAF, DCA, & NAVAIR | Co-Chaired by CNAF, DCA, & NAVAIR | Co-Chaired by CNAF, DCA, & NAVAIR |
| RLT is a Marine only O-6 Advisory Group to the MAERB in support of the TMS Teams and integrates into the RS&P CFT | The TRW is focused on sustaining the CR processes and includes linkages to other NAE processes, such as Readiness Policy, Resource allocation entitlements, Readiness metrics and standards | The MAERB governs development of Marine Aviation Readiness goals and metrics, assesses and shapes performance, directs integration and leveraging of the NAE institutional mechanism | CR CFT focuses on the linkage of performance gaps to root causes and effective utilization of available maintenance and supply data. Additionally, the CR CFT identifies TMS program costs that relate to RFT improvement. | The NAE Air Board reviews the accomplishments, successes, and possible readiness gaps that exist within a CFT or TMS team. The Air Board focuses on eliminating barriers to closing readiness gaps to include addressing required resources, additional costs, and a timeline for eliminating barriers. | The O&S Cost Deep Dive reviews the issues and risks that exist within a TMS and focuses on the future cost and cost reduction initiatives for specific TMS, including affordability opportunities, should cost initiatives, and cost reduction initiatives (FHP less fuel CPFH, total O&S cost, and investment requirements) | The NAE Air Board Mid-Cycle Review is an off-cycle update by each TMS to the Air Board. It is an opportunity to provide a current status, an update on issues briefed at the Air Board, as well as progress Action Items derived from the Air Board or at previous events. |
| USMC Only | USN & USMC | USMC Only | USN & USMC | USN & USMC | USN & USMC | USN & USMC |

Figure 4.2. Briefing Cycle

a. Read-ahead Process. For the RLT and MAERB, HQMC, APP/ASL and MARFORCOM will be responsible for coordination of documents, read-aheads, and briefs to the Marine Corps CR participants. For the TRW, CR-CFT NAE Air Board, O&S Cost Deep Dive, and Mid-Cycle Review, the NAE Communication Team will distribute accordingly. To allow adequate time for advance review of the information, a firm timeline has been established for receipt and distribution of read-ahead materials. Additional briefing guidance as well as the read-ahead submission deadlines can be found at the following link in the "NAE Briefing Guidance." Information will be submitted electronically to NAE@navy.mil.

https://usff.portal.navy.mil/sites/NAE/current_readiness/CRHandbook/Pages/Home.aspx

b. Cross-Functional Communications. Cross-functional communications (i.e. TMS to NAVSUP WSS and DLA-A for logistics issues, TMS to FRC for aircraft or component rework issues) is highly encouraged. While the TMS Team owns the briefing content and issue articulation, briefs should include a speaking part for identified stakeholder organizations to address support of TMS Team issues,

actions and/or gaps. The purpose of this is to create an engagement opportunity for provider stakeholders and to have TMS briefs focused on issues and actions. This requires another level of analysis, coordination, and collaboration earlier in the briefing cycle. TMS Teams must engage with provider organizations and then work together to ensure there is a complete understanding of the true root causes of gaps or issues and verify that necessary actions are identified to close subject gaps or issues. Required actions can then be generated for resolution.

4. Current Readiness Action

a. Purpose. The purpose of the CR reporting process is to apply a disciplined and standardized method of closing gaps in expected performance to achieve required readiness and/or output goals while also understanding resource utilization, costs, and constraints. Readiness and effectiveness goals are obtained principally by ensuring the on-time availability of reliable aircraft and MS, effectively generating and completing sorties, having trained aircrew/maintainers, and ensuring the logistics support needed to create core competent units exists.

b. Responsibilities. The TMS team is responsible for continually identifying gaps between required and actual performance by using the TMS specific KPIs and supporting CpCs. For the majority of Navy and Marine Corps Aviation, the top-level Key Metrics include but are not limited to:

- (1) Overall aircrew qualifications.
- (2) Maintenance manpower qualifications.
- (3) Aircraft availability.
- (4) ALM.
- (5) TMS cost and schedule.

c. Life Cycle Stage. Where the explicit goals of the TMS are measured using additional KPIs than those described above, the TMS Team shall work with the RS&P team, and via the RLT, to define and implement those metrics. For TMS aircraft transitions, TMS Teams will expand their scope to report on both the "sundown" of legacy aircraft and delivery of new platforms. The special case of a new TMS aircraft will require the normal KPIs to be tracked with additional information on the dynamic, transitional status of all aspects of the community's progress (e.g., include relevant acquisition information along with training progress).

5. Readiness Leadership Team (RLT)

a. Description. The RLT serves as a support and advisory organization for the MAERB and TMS Teams and as the primary driver for the implementation of the Marine Aviation CR Program.

b. Participants. RLT participants should include:

- (1) MARFORCOM ALD (Lead).
- (2) APP-1.
- (3) ASL-1.
- (4) Training and Education Command (TECOM) ASB.
- (5) Plans, Policies, and Operations, Readiness Branch (POR).
- (6) Marine Forces (Command, Pacific, and Reserve) ALDs and G-3 AirOs.
- (7) MAW ALDs, G-3s and G-8s.
- (8) Naval Supply Support Command (NAVSUP WSS) senior Marine.
- (9) Defense Logistics Agency Aviation (DLA-A) senior Marine.
- (10) Commander, Fleet Readiness Centers (COMFRC) senior Marine.
- (11) Commander, Naval Air Systems Command (COMNAVAIRSYSCOM) Marine Liaison.
- (12) Commander, Naval Air Forces (CNAP/CNAF) Marine Liaison.

c. Concept. The RLT, periodically on a monthly/as needed/as requested basis, reviews the status of the TMS prior to the TRW. Additionally, the RLT reviews and discusses issues related to USMC TMS readiness and reviews MCCB proposed changes prior to review/approval by the MAERB. TMS Teams will provide their issues and actions to the RLT for discussion no later than two days prior to the RLT. The TRW is the first official event in the NAE briefing cycle for Marine Corps TMS Teams. The RLT is not aligned to the TMS Team briefing cycle. TMS Team issues and actions may be discussed and or briefed by the appropriate TMS Team Representative during the RLT as determined by the TMS Lead.

d. Goals. The goal of the RLT reviewing the TMS briefs is to clearly understand, advocate for, or explain all issues and or actions briefed to the TRW, MAERB, and throughout the NAE briefing cycle. Any

additional issues that arise within the briefing cycle should be appropriately coordinated prior to adding them to the TMS brief.

e. Standard Agenda. The notional agenda for each RLT may include:

(1) Decisions, directions, and recommendations by RLT consensus.

(2) Support and advice to MAG-led TMS Teams.

(3) Provide monthly overall Marine Aviation readiness roll-up reports to the MAERB.

(4) Recommendations and AI updates to the MAERB.

f. Results. The RLT acknowledges proposed issues and actions and provides advice to the TMS Team for presentation to the MAERB.

g. Read Ahead. Read-aheads will be delivered a full 48 hours in advance in order to review and disseminate in a timely manner.

6. Type/Model/Series (TMS) Readiness Workshop (TRW)

a. Description. The TRW, often referred to as an O-6 "murder board," is the first NAE forum for TMS teams to present KPIs, associated documentation, and TMS initiatives supporting NAE and Marine Corps Aviation readiness goals. It is a metrics-driven working group established to conduct specific root cause analysis and gap closure planning based on a review of TMS CpCs and other supporting documentation. During these briefs, stakeholders - operator, provider, and/or sponsor - will be asked to address actions taken to resolve TMS Team gaps or issues. Analysis, coordination, and collaboration must be done early in the briefing cycle, to take full advantage of the leadership presence brought together at follow on MAERB, CR CFT, and Air Board VTCs. The TRW (as with all NAE briefs) should represent a coherent story. Observed gaps in performance should be tied to root causes. An effective TMS team will blend the efforts of the MAG, PMA, IWST and FRC to identify and resolve gaps and issues. Cost and resource constraints will be considered throughout the review and during subsequent analysis.

b. Participants

(1) CNAL N01R, (Host) N40, N42.

(2) TMS Lead and Supporting MAG COs.

(3) MAG OPSOs.

(4) MALS CO.

(5) NAVAIR TMS PM, Assistant Program Manager for Logistics (APML).

(6) NAVSUP WSS IWST.

(7) DLA(A) Representative.

(8) Marine Corps RLT Core Members.

(a) MARFORCOM, MARFORPAC, MARFORRES ALDs and G3 Air Officers.

(b) Wing ALDs, G3s, and G8s.

(c) TECOM, ASB.

(d) HQMC ASL and APP.

(9) CNAP N40, N41, N42.

(10) Respective RS&P Sub-team AOs and contractor representatives.

c. Concept. The TRW is hosted by CNAL N01R (RS&P Lead), HQMC ASL-1, N42, and N40 and is designed around the workshop concept to facilitate open discussion, which should focus on the identification of gaps between entitled and actual performance in the TMS specific Top KPIs. The TRW is not conducted as a formal, scripted brief, but there are specific required slides that are used during the workshop. Using supporting CpCs, the TMS should drill down into the gaps and describe root cause analysis, gap closure activity, and barrier escalation proposals in order to close the performance gaps. The TMS shall use the 'Issues' slide format (described in the Air Board briefing template) to help the Workshop members to understand the focus and scope of the issues the TMS is bringing forward. Root cause analysis and gap closure activity should focus in five specific areas and should highlight coordination that has taken place with provider organizations. It is the TMS Team's responsibility to ensure coordination has taken place. Specific areas are:

(1) Training Readiness accomplishment as it applies to aircrew training and Aircrew Core Competency.

(2) Flight Line Availability.

(3) RFT Availability.

(4) Maintainer Core Competency assessment.

(5) Cost.

(6) ALM and Utilization.

d. Feedback. Because it is a workshop forum, the TRW provides the opportunity to the TMS to gain valuable feedback and direction from the CR staff and other RLT participants, and whenever possible, allows providers to address specific issues in preparation for the MAERB and the CR CFT Brief. Standard CpCs, gap closure, and barrier escalation forms are to be used. TMS Teams present their current CpCs and speak to the analysis of gaps, root cause and closure activity. Data that is not represented in CpCs (e.g., APM/PL/PMA initiatives) will require specifically built slides which will be used for discussion purposes only. PMA and APM/PL will use the NAVAIR-approved Critical Item Logistics Review (CILR) process to address readiness and reliability action plans that are being applied to eliminate aircraft and systems RFT gaps.

e. Type/Model/Series Readiness Workshop (TRW) Goals. The TRW should be conducted with the following goals in mind:

(1) Identify gaps to training readiness, RFT availability, and cost.

(2) Present root cause analysis to provide a quantifiable link between gaps and the barriers to closing those gaps.

(3) Rank, order and prioritize the barriers by readiness/RFT and cost impact using the CILR reporting format.

(4) Provide information with regard to TMS program costs that relate to RFT improvement, i.e. "PRE" (Program Related Engineering), "PRL" (Program Related Logistics), and Aviation Procurement Navy-5, etc.

(5) Develop/review action plans for eliminating the barriers including cost impact analysis.

f. Standard Agenda. The notional agenda for each TRW may include:

(1) Opening remarks, with comments and expectations: CNAL N01R/ASL-1.

(2) TMS KPI Cost Meatballs and CpCs: Lead MAG CO.

(3) Sustainment Metrics: NAVSUPP (WSS), DLA-A, COMFRC, etc.

(4) TMS Issues: Lead MAG CO.

(5) TMS AIs.

(6) Gap Analysis/Issues. This section of the TRW allows the TMS Team to highlight chronic gaps, show how they are affecting the

TMS and what is being done to eliminate the gaps. This section should include slides which cut across the entire TMS, including MAG, PMA, IWST, and FRC data. As a guideline, any gap appearing on the Top Five must be addressed in this section. Issues the TMS is actively working should include detailed information about the plan to address the issue and any progress made. This section should focus on:

- (a) Key Performance Indicators/Supporting Metrics Gaps
 - (b) Provide links from significant gaps to root cause barriers
 - (c) Discuss action plans for eliminating each barrier
 - (d) Escalate barriers as required
- (7) TMS Lead Comments: Lead MAG CO.
- (8) Backup Slides: Should contain the following slides, at a minimum:
- (a) Cost Performance Quad Chart
 - (b) PRE/PRL Thermometer Chart
 - (c) USMC ALM Chart
 - (d) TMS Team Members
 - (e) TMS Laydown
 - (f) Acronyms

g. Results. If the TRW members are comfortable that there are no significant unaddressed issues then the workshop can be concluded. If the TMS requests assistance for an issue they are unable to solve, the Workshop members will work with the TMS to assign AIs to the relevant organization(s). Upon recommendation of the Workshop, issues that require significant external assistance will be brought forward to the MAERB (USMC Only) and CR CFT by the TMS Team for validation and escalation. All issues raised as AIs go to closure (normally, one of the outcomes below):

- (1) Recommendation or request approved by TMS Lead ("You've got it").
- (2) Recommendation or request accepted by the TMS Lead with specific expectation and timetable for resolution identified ("I'll do it").
- (3) Barrier escalated by TMS Lead ("I'll drive it").

(4) Recommendation or request rejected by TMS Lead (Unable due to personnel, material, or funding shortfalls or "More homework required"). It may not be possible to brief the complete root cause analysis in every case. If not:

(a) Develop a clear way ahead

(b) Assign responsibilities and timeline

h. Read Ahead. Will be delivered a full seven working days in advance in order to review and disseminate in a timely manner.

7. Marine Aviation Executive Readiness Board (MAERB)

a. Description. The MAERB is a General Officer steering group established to govern Marine Corps Aviation readiness.

b. Participants:

(1) Assistant Deputy Commandant for Aviation, Sustainment (ADCA(S)) (Lead).

(2) Deputy Commander, MARFORCOM, MARFORPAC, MARFORRES.

(3) Commanding Generals, MAW.

(4) Director of Operations, Plans, Policies and Operations.

(5) Other Assistant Deputy Commandants (as associate members).

c. Concept. The MAERB governs development of Marine Corps Aviation readiness goals and metrics, assesses and shapes performance, directs integration and leveraging of NAE institutional mechanisms and resources, and provides continuous Service-level direction and oversight of readiness, associated resources, issues and solutions. These solutions include manpower, facilities, acquisition, training, material readiness, and integrated logistics support. The brief to the MAERB is not a dress rehearsal for subsequent briefs, however, only issues brought up at the MAERB should be addressed at the CR VTC and Air Board.

d. Goals. The MAERB provides governance of Marine Corps Aviation and ensures that:

(1) Internal Marine Corps issues are understood and in work.

(2) The general officer body agrees on which issues are external to the Marine Corps that effect CR.

e. Standard Agenda. The MAERB is scheduled to meet monthly, usually on the fourth Thursday, 1600-1800 ET. The notional agenda for each MAERB is as follows:

(1) TMS Team Brief, in consonance with the NAE Master Schedule.

(2) All-Marine Aviation readiness roll-up and progress toward achieving the MAB objectives on a five-year time horizon and annual readiness improvement performance goals.

(3) Decision briefs, as required.

(4) Feedback Forums, when a TMS Team is not scheduled to brief

(5) AI review: a status update of all significant actions outstanding that have been assigned to improving Marine Aviation Readiness.

f. Results. The following are anticipated results from the MAERB:

(1) General Officers provide guidance, recommendations, and concurrence on proposed issues and actions for presentation in subsequent NAE briefs.

(2) Address Marine Corps specific issues that lie outside reporting to the CR VTC and Air Board (i.e. Reset/Preset, Marine Corps manning issues, Marine Corps readiness policies, Marine Corps Installations, etc.).

g. Read Ahead. Will be delivered a full 5 working days in advance in order to review and disseminate in a timely manner. Last minute changes can be effected by emailing out the one or two pages of changes via separate electronic distribution.

8. Current Readiness Cross-Functional Team (CR CFT) Brief

a. Description. The TMS Team is responsible for delivering a formal briefing to the CR CFT Co-leads. Like the TRW, this brief provides a means for presenting KPIs, associated documentation, TMS initiatives supporting the NAE and Marine Aviation readiness goals, and identifying ongoing gap closure and cost management efforts. The CR CFT brief normally scheduled approximately 5 weeks after a TMS team has concluded its TRW and is normally conducted via VTC.

b. Participants:

(1) ADCA(S) (Co-Lead).

(2) CNAL (Co-Lead).

- (3) COMNAVSUP (WSS).
- (4) NAVAIR 4.0.
- (5) NAVAIR 6.0.
- (6) COMFRC.
- (7) CR CFT sub-team members; RS&P Lead, EM&SCM Lead, etc.
- (8) TMS Lead/support MAG COs.
- (9) TMS NAVAIR PMA.
- (10) Other key TMS team members: DLA, Fleet Support Team.
- (11) RLT Representatives (HQMC, MARFORs, Wings, TECOM).

c. Concept. The CR CFT TMS brief is an opportunity to identify significant gaps between actual and required performance with an emphasis on trends rather than a single month's data point, to describe the analysis performed, to identify root causes of gaps, and to present the consensus of the TMS Team and supporting organizations. During these briefs, stakeholders - operator, provider, and/or sponsor will be asked to address actions taken to resolve TMS Team gaps or issues. Analysis, coordination, and collaboration must be done early in the briefing cycle to take full advantage of the leadership presence at CR CFT VTCs.

d. Goals. The goal for the TMS CR CFT brief is to make the time spent as productive as possible while identifying issues and causes early and addresses them as an enterprise.

e. Standard Agenda. The notional agenda for each CR CFT may include:

- (1) Opening remarks with comments and expectations: CNAL/ADCA(S).
- (2) Review of TMS Top KPI and Supply metrics.
- (3) TMS Team Issues.
- (4) TMS Team AIs.
- (5) TMS Lead Comments.

f. Results. Validation of TMS Issues and Actions for presentation to the Air Board and assignment of actions requiring external assistance.

g. Read Ahead. Will be delivered a full five working days in advance in order to review and disseminate in a timely manner.

9. Air Board Brief

a. Description. The TMS Team is responsible for delivering a formal briefing to the NAE Air Board to provide senior Aviation Leadership a top level review of the accomplishments and success in meeting the prescribed readiness goals, barriers to readiness production requiring senior officer engagement, and the future concerns of the TMS Team. The brief should begin with the identification of gaps between entitled and actual performance in the Marine Corps' Top KPI metrics. Only those panels with trends or gaps significantly different from entitlement should be addressed in detail and BRT activities should be summarized to address significant trends and gap closure plans.

| | | | | |
|-----------------------------|------------------|---------------------|------------------|----------------------|
| DCA | CNAF | MAERB Lead | CNP | SPAWAR |
| NAVAIR | OPNAV N98 | NAWDC | NAVSEA | NSC |
| CNAL | ADCA(S) | PEO-A | CNIC | DASN-AIR |
| CNAFR | CNAF ED | PEO-C4I | MARFORPAC | DASN-C4I |
| NAVSUP | CNATRA | PEO-Carriers | MARFORCOM | DASN-SHIPS |
| NAVSUP WSS | DLA(AV) | PEO-IWS | MARFORRES | |
| COMFRC | AIR 4.0 | PEO-JSF | TECOM | |
| OPNAV N43 | AIR 6.0 | PEO-U&W | OPNAV N82 | |
| OPNAV N2/N6 (F2) | | PEO-T | CNETC | |
| | | AIR 1.0 | ONR | |
| NAE Air Board EXCOMM | | | | |
| ← | | | | NAE Air Board |

Figure 4.3 NAE Air Board Membership

b. Participants:

- (1) NAE Air Board Executive Committee (EXCOMM) Flag and General Officers.
- (2) TMS Team Lead/Supporting MAG CO, PMA.
- (3) NAE Air Board members as depicted in Figure 4.3.
- (4) Respective CFT Leads, Action Officers, and contractor representatives.
- (5) MAERB and RLT representatives, as applicable.

c. Concept. The TMS brief to the NAE Air Board, as scheduled on the NAE master schedule, are opportunities to identify significant gaps between actual and entitled performance with an emphasis on trends rather than a single month's data point, to describe the analysis performed to identify root causes of gaps, and to present the

consensus of the TMS Team and supporting organizations. During these briefs, stakeholders - operator, provider, and/or sponsor - will be asked to address actions taken to resolve TMS Team gaps or issues. Analysis, coordination, and collaboration must be done early in the briefing cycle to take full advantage of the leadership presence.

d. Goals:

(1) Clearly identify barriers to readiness attainment requiring escalation, with thorough explanation of barrier removal efforts and the requirement for escalation.

(2) Presentation of the impact of TMS transitions to 12-24 month FR and other FR concerns that may not be reflected in current metrics or be related to a transition.

(3) Allow sufficient time for senior officer discussion and engagement.

e. Standard Agenda. The notional agenda for each Air Board may include:

(1) Review the TMS Top KPIs and Supply Metrics.

(2) TMS Issues.

(3) AIs.

(4) TMS Lead Comments. Summarize important issues and way forward.

f. Results. All issues raised during the NAE Air Board go to closure (normally, one of the outcomes below):

(1) Recommendation or request approved by the Air Board.

(2) Recommendation or request accepted by the Air Board with specific expectation and timetable for resolution identified.

(3) Recommendation or request rejected by the Air Board.

g. Read Ahead. Will be delivered a full five working days in advance in order to review and disseminate in a timely manner. Additionally, the TMS Lead will provide a pre-brief, which is 2-3 slides and includes a cover page and an abbreviated version of the TMS "Issues" slide(s), for the EXCOMM held on the Friday prior to the Air Board. These slides are due by 1200 (Pacific) on the Tuesday prior to the EXCOMM.

10. Operations and Sustainment (O&S) Cost Deep Dive

a. Description. After the Air Board, the TMS Team is responsible for delivering a formal briefing to the NAE Air Board EXCOMM to provide senior Aviation Leadership a top level review of the TMS issues and risks, affordability opportunities, should cost initiatives, and cost reduction initiatives (FHP less fuel Cost Per Flight Hour (CPFH), total O&S cost, and investment requirements).

b. Participants

(1) NAE Air Board EXCOMM Flag and General Officers (See Figure 4.3).

(2) TMS Team Lead/Supporting MAG CO, PMA.

c. Concept. The TMS O&S Cost Deep Dive brief to the NAE Air Board EXCOMM is an opportunity for the TMS Lead to identify TMS-specific issues and risks and for the PMA to identify the affordability opportunities that can facilitate their resolution. It is also an opportunity for the PMA to brief, in detail, the program's should-cost initiatives and cost reduction initiatives (FHP less fuel CPFH, total O&S cost, and investment requirements).

d. Goals:

(1) Clearly identify TMS-specific issues and risks requiring funding with thorough explanation of the affordability opportunities that can facilitate their resolution.

(2) Presentation of the program's should-cost initiatives and cost reduction initiatives (FHP less fuel CPFH, total O&S cost, and investment requirements).

(3) Allow sufficient time for senior officer discussion and engagement.

e. Standard Agenda. The notional agenda for each O&S Cost Deep Dive may include:

(1) TMS-specific Issues and Risks.

(2) Should Cost Initiatives.

(3) Cost Reduction Initiatives.

(a) FHP Less Fuel CPFH

(b) Total O&S Cost

(c) Investment Requirements

(4) Summarize important issues, discuss the way forward, and review TMS actions.

f. Results. All issues raised during the NAE O&S Cost Deep Dive at the Air Board EXCOMM go to closure (normally, one of the outcomes below):

(1) Recommendation or request approved by the EXCOMM.

(2) Recommendation or request accepted by the EXCOMM with specific expectation and timetable for resolution identified.

(3) Recommendation or request rejected by the EXCOMM.

g. Read Ahead. Will be delivered NLT 1200 Pacific Time on the Tuesday prior to the Friday EXCOMM phone call in order to review and disseminate in a timely manner.

11. Mid-Cycle Review

a. Description. Six months after their Air Board, the TMS Team is responsible for delivering an abbreviated brief to the NAE Air Board in order to provide senior Aviation Leadership a top-level update based on their previous brief. The brief should be five to seven minutes in length and should contain a status update on KPIs, Issues, and AIs as well as some brief comments from the TMS Lead. Only those panels with trends or gaps significantly different from entitlement should be addressed in detail.

b. Participants. Same as Air Board.

c. Concept. The TMS Mid-Cycle brief to the NAE Air Board, as scheduled on the NAE master schedule, is an opportunities to provide an update on the status of KPIs, Issues, and AIs, as well as a chance for the TMS Lead to provide insight into future issues or concerns. During these briefs, stakeholders - operator, provider, and/or sponsor - may be asked to address actions taken to resolve TMS Team gaps or issues. Analysis, coordination, and collaboration must be done early in the briefing cycle, to take full advantage of the leadership presence.

d. Goals:

(1) Provide succinct update of KPIs, Issues, and AIs.

(2) Present TMS thoughts and concerns about future events and issues.

(3) Allow sufficient time for senior officer discussion and engagement.

e. Standard Agenda. The notional agenda for each Mid-Cycle Review may include:

- (1) Review the TMS Top KPIs and Supply Metrics.
- (2) TMS Issues.
- (3) AIs.
- (4) TMS Lead Comments. Summarize important issues and way forward.

f. Results. All issues raised during the NAE Air Board Mid-Cycle review go to closure (normally, one of the outcomes below):

- (1) Recommendation or request approved by the Air Board.
- (2) Recommendation or request accepted by the Air Board with specific expectation and timetable for resolution identified.
- (3) Recommendation or request rejected by the Air Board.

g. Read Ahead. Will be delivered a full five working days in advance in order to review and disseminate in a timely manner.

12. Actions Post Air Board Briefing Cycle

a. Monitor Action Items. AIs are reviewed by the NAE Air Board Executive Committee and monitored by their respective staffs through the Directors, Coordinators and Action Officers (DCAO) bi-weekly telephone conferences. In addition to AIs generated at the Air Board, TMS teams can request AIs from other venues such as the Executive Supportability Summits (ESSs). AIs will be assigned to one of the NAE CFTs for action/tracking and will have a Center of Gravity (COG) (individual responsible for completing the action), a specified deliverable that will be presented to or briefed to the Air Board EXCOMM, and a due date. An AI generated at the Air Board can only be closed with the approval of the EXCOMM.

b. Enterprise AIRSpeed Newsletter. In publication since 2003, the CR/Enterprise AIRSpeed (EAS) Newsletter is one of NAE's primary tools to communicate TMS Team efforts enabling Naval Aviation readiness; it also serves to chronicle successes of the NAE and Continuous Process Improvement (CPI). While it mainly focuses on the CR CFT and the Maintenance and Supply Integration Performance Improvement Branch (EASs umbrella organization) activities, it also supports TF/FR CFTs and IRMT. It is disseminated via an e-mail link to NAE stakeholders including: Flag and General Officers, Senior Executive Service civilians, military/civilians in Naval Aviation commands (including on aircraft carriers and in Squadrons), contractor support,

and to Continuous Process Improvement (CPI) practitioners in other Naval components. Additionally, it is posted to the NAE's public-facing website.

c. Each TMS Lead is emailed a request for an article that highlights the TMS team's recent accomplishment(s). The email, generated by the newsletter editor and sent within two weeks after the team briefs the Air Board, includes criteria and guidelines for submission. Inputs are generally due five weeks after the request is made and must be approved for public release by a public affairs officer. The point of contact for submission is the NAE Public Affairs Officer.

(This page intentionally left blank)

Appendix A

Barriers to Success and Process Improvement

1. Barrier Identification and Removal Process. A barrier is anything that prevents the realization of entitled performance and/or the attainment of established goals in a process or organization. To address barriers to performance, the CR CFT supports the employment of a Barrier Identification and Removal process. In a dynamic environment such as Naval Aviation, issues continuously arise so there is a need for a continuous, repeatable, disciplined method for identifying and addressing barriers to success. Within the Barrier Identification and Removal process, BRTs are formed. Their purpose is to understand why a problem exists, to analyze the barrier, to focus on root causes, and to ultimately remove the barrier or escalate it to the organization/person who can. Because the root cause to a specific problem could exist in a seemingly unrelated area or supporting process, the BRT must have a cross-functional composition comprised of all required stakeholders.

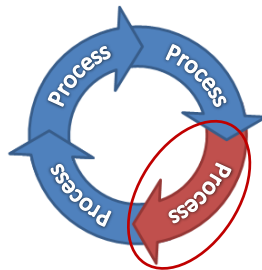
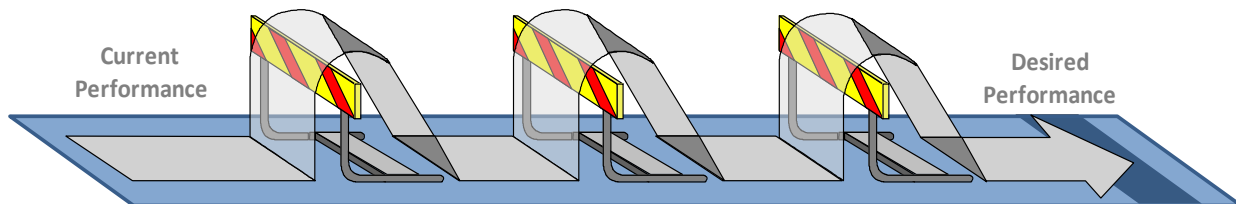


Figure A.1. Simple Barrier Identification



Subject Matter Barriers

- Design specifications
- Inadequate instructions
- Qualification of staff
- Equipment availability

Process Barriers

- Ineffective measurements
- Poor process design
- Changing priorities
- Bottlenecks

Cultural Barriers

- Paradigms
- Stovepipe activity
- Lack of accountability
- Resistance to change
- Optionalism

Figure A.2. Types of Barriers to Performance

a. Barriers and Substitute Processes

(1) Barriers to Performance. When addressing barrier removal, BRTs must be cognizant of three main types of barriers in an organization or process and how they influence each other. These are: Subject Matter Barriers, Process Barriers, and Cultural Barriers. Barriers may exist in isolation or in combination. Where barriers exist in combination, they could be driven by each other or may be closely interrelated. For example, Cultural Barriers could spawn certain Business Process Barriers and in turn create Subject Matter Barriers.

(a) Subject Matter Barriers. Subject Matter Barriers specifically focus on issues related to unique industries, businesses, or functional expertise. They include, but are not limited to, materials and specifications, specific technical process requirements, and equipment requirements. Typically Subject Matter Barriers can be removed by individuals if they do not involve Process or Cultural Barriers.

(b) Business Process Barriers. Business Process Barriers work against the achievement of a seamless process. They could be the result of Subject Matter or Cultural Barriers. They include issues such as bottlenecks in a manufacturing or production process, poor scheduling of equipment, lack of personnel or training, a poor process design, and/or continuously changing priorities. Generally these types of barriers could be removed by a business unit, squadron, or TMS Team as long as constraining Cultural Barriers are being addressed separately.

(c) Cultural Barriers. Cultural Barriers are part of an existing paradigm within an organization. These barriers are the most difficult to address and usually require considerable time to overcome. They are exemplified by ingrained behaviors or processes that have 'always been that way.' Because of this, they inhibit an organization's ability to adapt to new economic environments, shifting cultural norms, or changes in the organizations demographics. In organizations with multiple business units, Cultural Barriers could exist in individual units without either knowing the cross unit impact of that barrier. For example, in Naval Aviation Cultural Barriers could exist between the Organizational, Intermediate, and Depot Levels of maintenance or within a single squadron manifesting between Operations and Maintenance. In any case, these barriers will inhibit the realization of optimal performance and could spawn Subject Matter Barriers, Business Process Barriers, and the invention of substitute processes to compensate for these barriers. Cross-functional understanding of the barrier and good communication are key to addressing and removing these barriers.

(2) Substitute Processes. Barriers within a process, organization, or in other situations will give rise to 'workarounds' or substitute processes. Substitute processes are typically efforts to attack the symptoms of non-responsiveness or a barrier without removing the cause. Since implementing a substitute process is easier than removing a root cause barrier, well-meaning personnel will typically develop a 'fix' to the problem or attempt to apply more resources in an effort to overcome a shortfall or speed up a process. Examples of substitute processes include: expediting parts procurements, adding extra personnel to a job, applying more resources (money or parts), or relying on subject matter experts for information or work instead of teaching new personnel.

(3) Although the substitute process or workaround must be removed in conjunction with the identified barrier, it may take some time to implement corrective action. Therefore, some of the substitute processes or workarounds may have to stay in place until the barriers are removed and corrective action is taken.

(4) Barriers and Substitute Processes Interrelationships. As shown in figure A.3 below, barriers and substitute processes typically overlap and support each other. This interaction can become deeply ingrained in an organization making it very difficult to adapt to new environments, operating models, or changing demographics. A Cultural, Business Process, or Subject Matter Barrier could grow in isolation but will typically spawn barriers in other areas and substitute processes to compensate. The figure below is only one possible scenario for the propagation of barriers.

(a) As shown by this example, barriers tend to exist in combinations and may be driven by each other. Because of this they must be removed in combination. In general, if the same process and Subject Matter Barriers are seen throughout an organization, there may be a Cultural Barrier at work. As described in the next few paragraphs, implementing generic solutions should accelerate the removal of similar barriers. The Barrier Identification and Removal Process should take into account all the barrier types when addressing root cause issues.

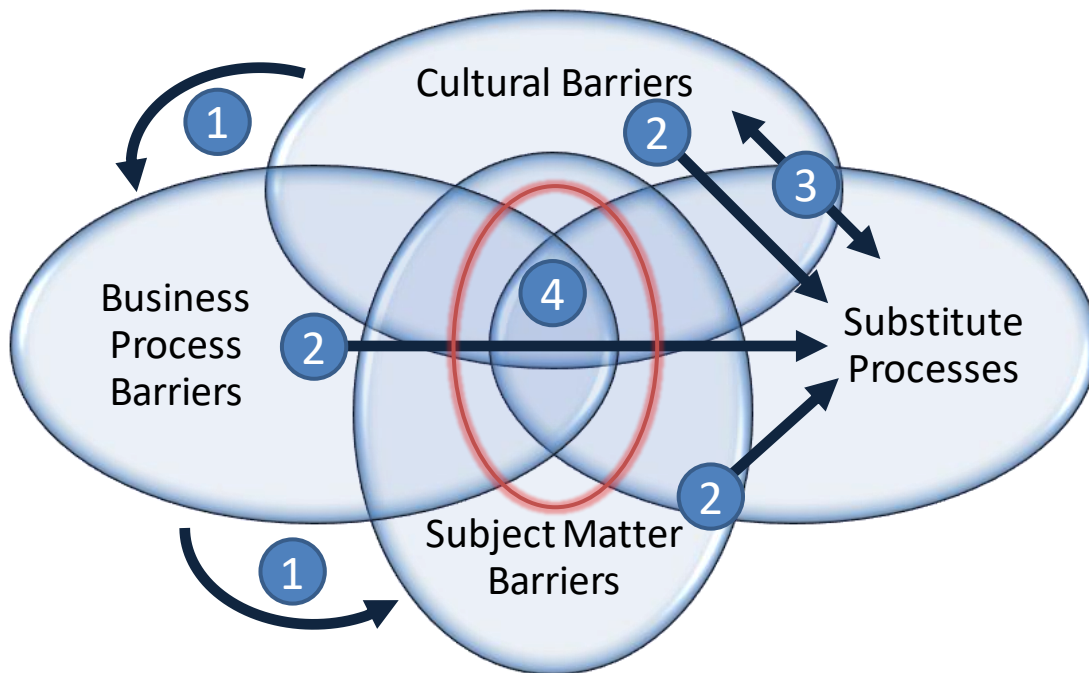


Figure A.3. Barriers to Performance

NOTE: Referring to Figure A.3, an organization might develop a Cultural Barrier through no action of its own. These types of barriers might simply develop as a result an organization failing to keep pace with changes in its operating environment, changes in leadership, or simply becoming disconnected with other business units (Operations and Maintenance departments in a squadron). This lack of coordination might spawn barriers in simple business processes. These could include miscommunications in scheduling aircraft and operational events or not synchronizing aircraft maintenance with operational requirements - creating bottlenecks in training. Further, the communication issues driven by the Cultural Barrier could impact the organization by creating Subject Matter Barriers.

(b) In this case, these might include a general lack of understanding of equipment requirements to support specific flight operations. To overcome these drawbacks, individuals within the organization might develop substitute processes to gather information to ensure work gets accomplished. Maintenance might throw more resources at specific aircraft in response to an 'emergent' need communicated by Operations. Operations might think of creative ways to regain lost sorties and training opportunities. Because the work is being accomplished through the substitute processes, and rewarded, they help lock in the Cultural Barrier.

b. Barrier Removal Teams. Barrier Removal Teams are formed to understand why a problem exists, to analyze the barrier, to focus on

root causes, and to ultimately remove a barrier or escalate it to the organization/person who can. BRTs are desolved when their stated objectives are met. Because the root cause to a specific problem could exist in a seemingly unrelated area or supporting process, the BRT must have a cross-functional composition. The BRT is chartered by an organization's lead or their deputy (MAG CO, PMA, etc). The charter gives the BRT the authority to apply resources to the investagation. BRTs should meet regularly (usually once a week) and report their findings and status periodicly to the BRT chartering authority.

c. The BRT is typically composed of a small group of people (ten or less) and is lead by a subject matter expert who is a peer to the other members of the group. The BRT Lead should be trained in barrier identification and removal methods. The individual TMS advisors are available to provide BRT training. It is not recommended to have a senior officer lead a BRT staffed with junior personnel. Having peers on the team helps facilitate frank conversations and give brainstorming activies a reasonable chance at success. BRT members should be members of the TMS who formed the BRT, but could be from outside the TMS, if required.

d. Barrier Removal Process Implementation. BRTs may use any of several approaches to barrier identification and removal. Regardless of the method used, the key is to use a disciplined approach to the identification and removal of barriers. The CR CFT focuses on two main processes: the 16-Step process and a modified version of the Define, Measure, Analyze, Improve, and Control (DMAIC) process. There is also an abbreviated 3-step process, distilled from the 16-Step process for use when previous BRT work in the area was previously accomplished. Each process encompasses the majority of the same steps to full resolution. The scope, complexity, and familiarity of the barrier or process determines which removal method should be used. An initial 16-Step review of all portions of the NAE was conducted during inception and this full process review should be repeated periodically to re-evaluate the processes and sub-processes at the wing and squadron levels.

e. When implementing the Barrier Removal Process each phase of the production process, to be evaluated, must be identified during an initial analysis to provide an understanding of the interrelated steps of the various phases. As a general production-monitoring tool, a review using the most up-to-date CpCs, or available metrics, is conducted to take note of the gaps in current performance relative to required performance on the various panels. If performance discrepancies are noted on any of the metrics, a brainstorming session should be used to list all barriers, regardless of their apparent contribution to the problem, to removing the performance "gap."

f. Once identified, the barriers are then ranked, using the group judgments, based on impact of the performance gap and difficulty to

remove. The barrier removal plan then targets those barriers which have the highest impact and are easiest to remove. Some barriers are not totally removable by the Group/Squadron and will require escalation to the Wing or Type Commander, the appropriate CFT, or another command within the NAE. Escalated barriers must be clearly defined and any local parts removed before escalation.

g. CpCs are closely monitored to gauge gap closure results of local and escalated barriers. As one barrier is removed and the metrics show results, another barrier from the backlog is activated. This success is also shared with the CFT through 'lessons learned' which would prevent working the same problem from the ground up at another site. This process is repeated until all barriers are either removed or their impact mitigated, allowing current performance to close the gap.

h. 16-Step Process

(1) Overview. Initial barrier identification, analysis, and removal can be outlined in a 16-Step process. This process describes the general methodology and guidelines followed to identify and remove a barrier. The steps are listed below:

- (a) Step 1. Identify the relevant process or sub-process.
- (b) Step 2. Establish the scope of the process.
- (c) Step 3. Identify and bring together the key players.
- (d) Step 4. Validate the scope and determine the process boundaries.
- (e) Step 5. Map the process.
- (f) Step 6. Establish baseline performance.
- (g) Step 7. Determine value-added and non-value-added steps.
- (h) Step 8. Remove non-value-added steps from the process map, to create a "should-be" (required) process.
- (i) Step 9. Determine measurements.
- (j) Step 10. Design the measurement system.
- (k) Step 11. Establish initial entitlement.

- (l) Step 12. Identify barriers.
- (m) Step 13. Develop cause and effect diagram to find root cause barriers.
- (n) Step 14. Rank root cause barriers.
- (o) Step 15. Assign and schedule barrier removal actions.
- (p) Step 16. Track progress through the measurement system.

(2) Details. The 16-Step process listed above follows these specific guidelines. To support the process CR developed the BRT Work Package tool, an MS Excel-based product. The BRT Work Package may be found on the CR SharePoint website under the 'Barrier Removal Team' on the left-hand navigation section. Use of the BRT Work Package is described below in concert with the 16-Step process.

(a) Step 1. Identify the Process. Process Management is the concept that everything within an organization fits within a business process and has a process flow that can be developed. Each and every process has a history that can be analyzed, past performance that can be determined (baseline and requirement), and a measurement system that can be applied (e.g., first pass yield (FPY) and cycle time).

(b) Step 2. Establish the Scope of the Process. Determine the Starting and Stopping Points (boundaries), which are discrete events or items that define the limits of the process to be analyzed.

| <div style="float: left; border: 1px solid black; padding: 2px;">Help</div> <div style="text-align: center;"> NAE Current Readiness <i>Barrier Removal Team (BRT) Work Package Charter</i> </div> | | | | | |
|---|----------------|---------------|---|-------------|-------------------------------|
| Project Business Case: <small>Clearly describe consequences of No-Action, correlation to Roadblock Objective and potential Monetary Impact</small> | | | | | |
| Problem Description: <small>Enter the problem here i.e. "Propellers Increasingly Falling Prior to High-Tide Expectations?"</small> | | | Date BRT Formed: | | |
| Goal Statement: <small>Clearly describe Completion Criteria</small> | | | Due Date: <small>(Expected Completion Date)</small> | | |
| Project Scope: <small>Describe Scope, Include Limitations</small> | | | | | |
| Physical Deliverable: <small>Describe the Deliverables</small> | | | | | |
| Team Members: | | | | | |
| Name / Rank | Command | E-mail | Phone | Ext. | Primary Responsibility |
| <small>Team Lead:</small> | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Figure A.4. BRT Work Package Team Charter

(c) Step 3. Identify Stakeholders and establish a BRT. It is important to identify all those who are a factor in and are affected by the process/barrier being analyzed, and then to establish a BRT. If a problem lies across organizational boundaries it will be necessary to establish a cross-functional BRT. The teams "make-up" brings together the proper knowledge and skill sets required to solve problems and allows for objectivity, fresh thinking, and new points of view to be applied to the issues at hand. The BRT must be given the necessary authority and empowerment to identify and execute solutions. Each team has a Leader, Members, Scribe, and Measurement Specialist with clearly defined roles and responsibilities. Figure A.4 depicts the BRT Charter containing information for Step 3.

(d) Step 4. Validate the Scope, Determine the Process Boundaries. Once the key players are assembled, the scope of the desired process and its boundaries must be validated. This will ensure that efforts are focused on the specific process and help avoid efforts that do not affect the desired outcome.

(e) Step 5. Map the Process. Process Maps are flow charts or diagrams that show the process flow and correlate activities with functional areas/departments/organizations. Process maps are read from left to right, corresponding to the advancement of time. When used properly, they become a powerful tool and provide an overview of the process, including inputs, outputs, rework and feedback, and show the path to follow when tracking cycle times and

FPY. Process maps also assist in identifying non-value-added steps within a process and the gaps and disconnects between functional areas. Chapter 3: Metrics Development provides an overview for building process maps and metrics. Figure A.5. represents a typical process map.

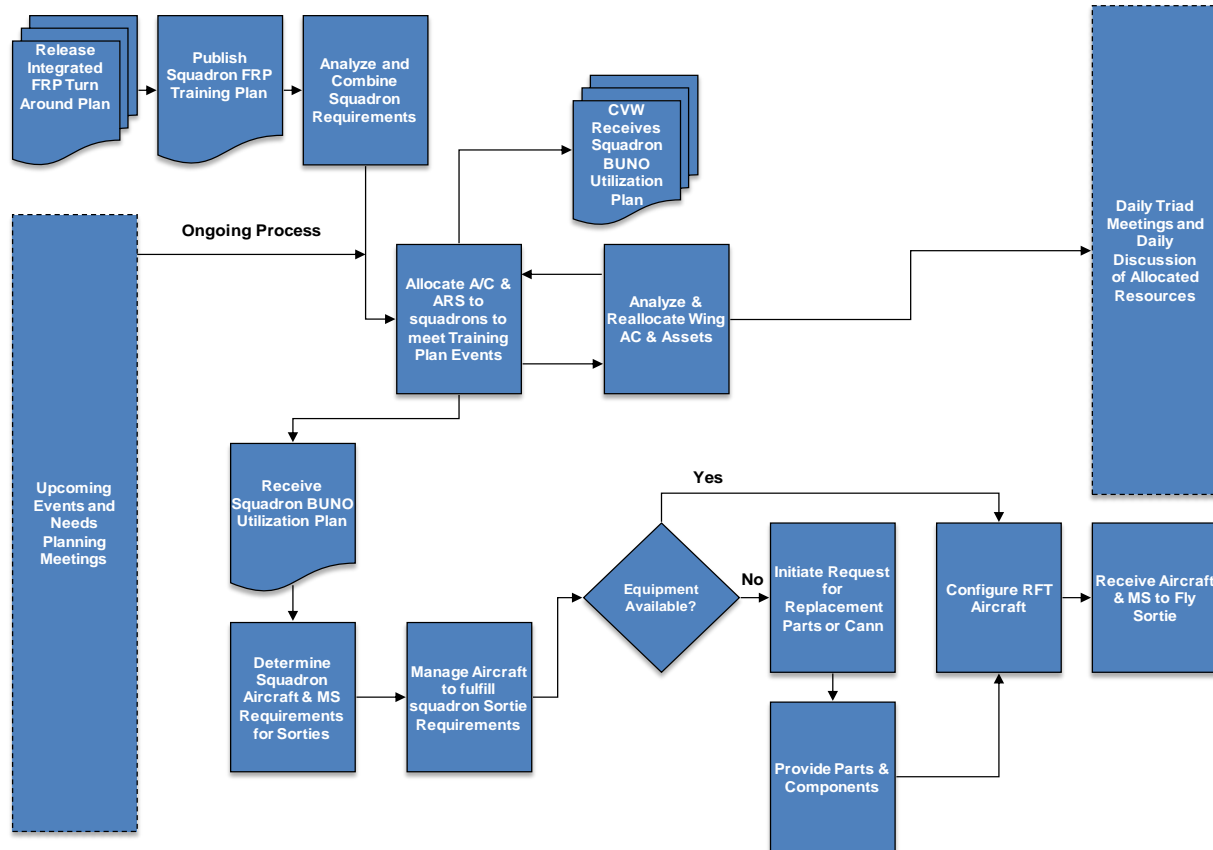


Figure A.5. Process Mapping Example

(f) Step 6. Establish Baseline Performance. Establish the level of performance required to meet process guidelines. The baseline should be capable of showing historical and current performance levels as well as future progress of barrier removal.

(g) Step 7. Determine Value-Added and Non-Value Added Steps. Review all steps within the process for its value in producing readiness to the Fleet. If the activity does NOT have specific value in supplying readiness to the Fleet and/or have a positive effect in reducing costs, then remove that activity or event from the process.

(h) Step 8. Remove Non-Value Added Steps from the "As-Is" Process Map, to create a "Should-Be" (Required) Process. Evaluate each step in the process map and determine if there is value or purpose. If the product of the process is not providing value to the user's job or is an integral part of the overall process then eliminate the step.

(i) Step 9. Determine Measurements. This may be one of the most critical steps in the 16-Step process. Focusing and identifying the correct barrier removal actions requires that the right metrics and measurements be used. Failure to identify the correct metrics set will not only hamper the effectiveness of process improvement actions but may actually result in actions contrary to the desired outcome.

(j) Step 10. Design the Measurement System. Once the items that require measures have been identified, it is imperative that appropriately defined measurements be designed. Measurements must be realistic and be have well defined parameters. Data sources and the methods and timing of gathering the data must be established. Map out a diagram of the flow of the data from the source to display on the control charts. It may be necessary to design new control charts in order to capture the required measurements.

(k) Step 11. Establish Initial Requirement. Requirement is performance level necessary to meet the mission. Examine the process and make a preliminary determination of high-level barriers that are requiring substitute processes. Next, examine those substitute processes and estimate the negative effects of having to perform the substitute steps. Then perform a calculation to determine performance levels if those substitute steps are eliminated. This is the initial requirement. It represents only a first attempt at determining entitlement and may require refinement after additional work is performed in eliminating barriers.

(l) Step 12. Identify Barriers. As we discussed previously, there are three (3) different types of barriers. Review section A.1.1 for detailed information. Briefly, the three types of barriers are:

1. Subject Matter Barrier: Lack of unique technical or functional expertise.

2. Business Process Barrier: Fault and/or non-value adding steps, procedures, rules, regulations, and practices that prevent seamless processes and/or entitlement.

3. Culture Barrier: Subject matter and business process barriers or substitute processes that have become so locked into the culture that they have become part of the existing paradigm.

Most Subject Matter and Business Process Barriers can be removed at this level within the organization. However, Cultural Barriers are more difficult to remove although they may have the greatest impact for improvement, and must be removed by the highest levels within the organization. Figure A.6 shows examples of each type of barrier.

| Subject Matter Barriers | Business Process Barriers | Cultural Barriers |
|--|---|--|
| Lack of qualified aircrew/instructors | Maintaining parallel databases or spreadsheets to track unit readiness/qualifications | Aircrew qualification grading criteria, procedures, and methods |
| Lack of trained Maintenance personnel to perform required aircraft maintenance | Parts delayed/arrive in non-RFI condition due to shipping processes | Maintenance/Supply procedures that are in place due to 'historical precedence' |
| Recruiting policy/standards | | Rotational assignment policy |

Figure A.6. Barrier Identification

(m) Step 13. Develop Root Cause and Effect Diagrams. Begin looking for substitute processes. Substitute processes are "work-arounds" that are put in place instead of removing Subject Matter, Business Process, or Culture Barriers. Substitute processes often become the focus of process improvement rather than working towards removing the root cause barriers.

There are several ways in which to identify Root Cause barriers:

1. Distributional Analysis. Distributional Analysis through the capturing of historical data, entering it into a spreadsheet, and then graphically presenting this data, trends can be discovered, pointing the way to where barrier removal efforts should be focused.

2. Brainstorming. Select the "brainstorming" method to be used. Two popular methods are:

a. Free Wheeling. Team members call out their ideas spontaneously. The scribe writes down all ideas as spoken and keeps them visible.

b. Round Robin. The leader asks each member, in turn, for an idea. Members may pass on any round. The session continues until all members pass. The scribe writes down all ideas as spoken and keeps them visible.

3. Design Cause & Effect Diagram (also known as the Fishbone or Ishiwaka Diagram) to Find Root Cause Barriers. The Cause & Effect Diagram is a simple yet powerful tool used to find the Root-Cause Barrier, while identifying causes, effects, and substitute processes (see Figure A.7).

4. Agree on a problem statement (effect). Write it at the center right of the flipchart or whiteboard. Draw a box around it and draw a horizontal arrow running to it.

5. Brainstorm the major categories of causes of the problem. If this is difficult use generic headings: Training, Materials, Parts Procurement, Measurement, Personnel, Environment, etc.

6. Categories. Write the categories of causes as branches from the main arrow.

7. Brainstorm all the possible causes of the problem. Ask: "Why does this happen?" As each idea is given, the facilitator writes it as a branch from the appropriate category.

8. Causes. Causes can be written in several places if they relate to several categories

9. Why. Again ask "why does this happen?" about each cause. Write sub-causes branching off the causes. Continue to ask "Why?" and generate deeper levels of causes. Layers of branches indicate causal relationships.

10. Stumbling Blocks. When the group runs out of ideas, focus attention to places on the chart where ideas are few. Use the following procedure for the fishbone method:

a. Define the effect and attach it to the "spine".

b. Show the major causes as "bones" below the spine.

c. Show corresponding substitute processes or "negative effects" as "bones" above the spine.

d. Show culture constraints as opposing double arrow (if applicable).

e. The causes help characterize the effect, some are symptoms and some are barriers.

f. Work a symptom backwards until you reach the root cause, which is the barrier.

Ishikawa Diagram

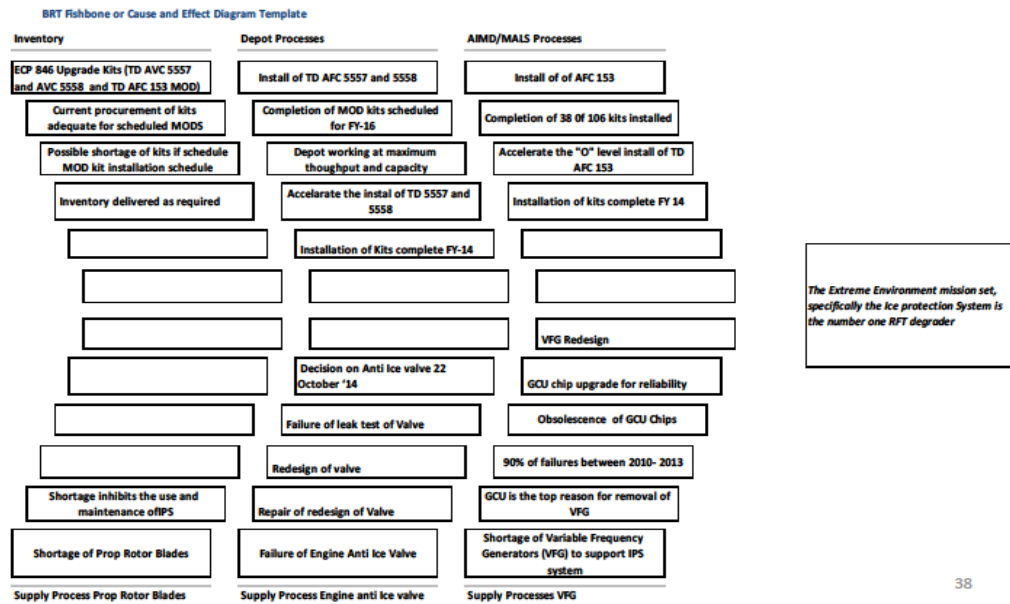


Figure A.7. Fishbone or Ishikawa Diagram

n. Step 14. Rank Root Cause Barriers. Once Root Cause Barriers have been identified and a list is established, it is important that a ranking and/or prioritization of these barriers follow (see Figure A.8.). The BRT Work Package contains automated barrier ranking tools. A link to the BRT Work Package may be found on the CR SharePoint site navigation menu.

| Problem Description: Increased Corrosion found in Aircraft Causing Reduced RBA | | | | | | | | | |
|--|-----------------|--|----------------------|---------------------------|---------------------|------------------------------------|---------|--------------------------|------|
| Barrier | Category | Enter the Reasons or Substitute Processes which may be contributing to the Problem | Reason Impact (1-10) | Removal Difficulty (1-10) | Internal / External | Reason or Substitute process Owner | Comment | Issue Validated (Yes/No) | Rank |
| 1 | Training | Corrosion Control Procedures | 3 | 5 | Internal | | | Yes | 2 |
| 2 | Training | Maintenance Training | 3 | 1 | Internal | | | No | 3 |
| 3 | Inspections | Inspection Cycles | 5 | 7 | External | | | No | 1 |
| 4 | Training | Preservation Procedures | 1 | 3 | Internal | | | Yes | 6 |
| 5 | Depot Processes | PRC | 2 | 4 | External | | | No | 4 |
| 6 | Environment | Use of Organic Washrack | 1 | 5 | External | | | No | 5 |

Figure A.8. Barrier Prioritization Sheet

1. Rank. The list of barriers is ranked on a scale of 1 to 10 for impact and removal difficulty. The "Rank" for each barrier is automatically calculated within the work package. It indicates the barriers relative importance and is used to create barrier analysis charts indicating which barriers might be addressed first. Use the barrier rankings in conjunction with the barrier charts (Figure A.9. below) to prioritize barriers for removal action. This is not an exact process and common sense should prevail. Each item must be identified as either an 'Internal' or 'External' issue so

each may be mapped accordingly on the Barrier Removal Priority Ranking charts.

a. Impact. "Impact" refers to the significance of improving the process if the barrier is removed. A rating of "10" on "Impact" indicates removing this barrier will provide the highest impact, where a rating of "1" indicates that the significance will be very small.

b. Removal Difficulty. "Removal Difficulty" refers to how difficult it will be to remove the barrier. A rating of "10" on "Removal Difficulty" indicates that the effort to remove the barrier is extreme, and a rating of "1" indicates the effort will be minor.

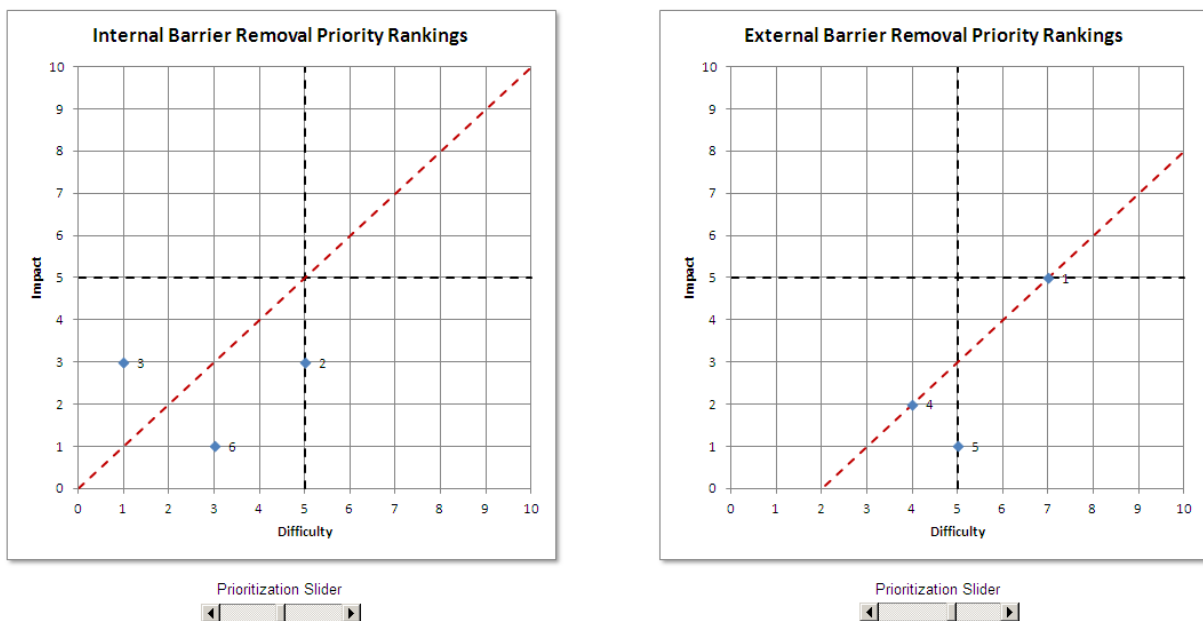


Figure A.9. Barrier Ranking Charts

2. Rating. When determining ratings for Impact and Removal Difficulty, consider:

a. It's not important that the ratings for each barrier are precise

b. It is important that ratings for each barrier are correct in the relative importance for each barrier.

c. The process for rating the barriers for Impact and Removal Difficulty should not be made overly complicated. A session lasting for no longer than one-hour is adequate.

d. It is not important that detailed analyses of each barrier be made prior to the ranking sessions.

e. It is important that participants in ranking sessions are reasonably knowledgeable of the process.

f. During a ranking session, no single individual should dominate discussions or "pull rank"

Once the Barrier Prioritization columns have been filled in, the barrier rankings will be automatically plotted on the Removal Priority Rankings charts (Figure A.9.). The Removal Priority scatter plot indicates the impact and removal difficulty of each barrier, categorized by 'Internal' and 'External'. Barriers with the quickest payback and the least amount of effort will appear in the upper left-hand corner of this chart. Removing barriers here will result in the quickest and biggest payback. Use the Barrier Prioritization Sheet 'Sliders' to help prioritize barriers for removal action.

(o) Step 15. Assign and Schedule Barrier Removal Actions. Once the barriers to be worked are identified, the Work Package form BRT AIs Tracker will help guide the team to a successful completion. See Figure A.10 below for an example.

| Action | What | Lead | Status | Assigned Date | Due Date | Comments |
|--------|---|------|--------|---------------|----------|----------|
| 1 | Describe anticipated macro level Actions and indicated who is responsible for each and when each is expected to be completed - This is the initial best estimate - Can be revised as necessary. | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |

Figure A.10. BRT Assignment Schedule and Figure Action Item (AI) Tracker

(p) Step 16. Track Progress through the Measurement System. The success of removing the barrier should be reflected in the "Results" metrics. If improvements are not realized within the expected time, a study should be undertaken to determine if:

1. The barrier was truly removed.
2. Its removal impact was originally overstated, or
3. The "barrier removal" resulted in a new "substitute process" or the creation of a new barrier.

(3) Abbreviated 3-Step Process. The abbreviated 3-step process incorporates the majority of the steps from the 16-Step process in a work package format. This abbreviated process is for use in a previously evaluated and diagrammed process and is summarized in the following three steps:

(a) Identify, Rank, and Prioritize Barriers

(b) Assign and Schedule Barrier Removal Actions (establish Work Package and AI Management)

(c) Track Progress through the Measurement System

i. Barrier Removal Using a Modified DMAIC Process. The DMAIC methodology is the driving force behind Six Sigma process BRTs and is used to remove barriers when improving existing processes. DMAIC is an acronym for the 5 required phases of a Six Sigma project: Define, Measure, Analyze, Improve, and Control. The key to success is an understanding of what is needed, the disciplined use of facts, data, and statistical analysis, and diligent attention to managing, improving, and reinventing the processes that drive your organization.

j. The BRT Work Package tools also support the modified DMAIC process use by CR in the same way they support the 16-Step process. The BRT Work Package may be found on the CR SharePoint website under the 'Barrier Removal Team' on the left-hand navigation section. BRT leads are encouraged to use the Work Package to support DMAIC.

(1) Define. The first phase is defining what the customer values and what improvements are desired. This Define phase is where the team begins the journey. The key deliverable for this phase is the project charter. The project charter document is a "living document" throughout the life of the project. It is expected that the project charter may be revised from time to time during the project lifetime as you learn more about the issue.

(2) Important aspects of the project charter are as follows:

(a) Project Business Case. A well-written business case will explain the importance of the project. It should detail any of the following: impact to readiness objectives, cost variances, man-hour expenditures, entitlement performance gaps, etc. It should also describe the consequences of taking no action, correlate the project to readiness objectives, and specify the potential impact of the project in cost (i.e. AVDLR/AFM expenditures--why action must be taken to address the barrier).

(b) Problem Statement. The purpose of the problem statement is to clearly describe the problem and to provide important details of the impact to the Type/Model/Series (TMS), Marine Air Group (MAG), or other organizations.

(c) Goal Statement. This element defines the expected results from the project. The results should include information regarding project completion timeline, deliverables, savings expected, and improvement objectives. It should also address how goals will be

measured and how reaching this goal will influence any metric developed for the project.

(d) Project Scope. The project scope itemizes the project boundaries. It is imperative that the beginning and ending process steps are identified. This will help keep your team focused and help prevent "scope-creep."

(3) Measure. The measure phase is the second phase of the DMAIC process. The objective of this phase is to garner as much information from the current process and make the entire process visible. The Barrier Removal Team needs to know exactly how the process operates and is not concerned with how to improve the process at this time. Measures can be as simple as building a Pareto chart or as complex as mapping out an entire process capability. It all depends on the level of detail required and what the team needs to achieve.

(4) The important tasks in the measure phase are: creating a process map, collecting baseline data (where are we now?), and summarizing the collected data. In most projects, the process map will be completed as the first step. The process map provides an end to end visual representation of the process under investigation. It can also provide additional awareness of process inefficiencies such as cycle times or bottlenecks and it can identify non-value added process requirements. The process map may also show where data can be collected.

NOTE: Chapter 3 (Metrics Development) provides an excellent overview for building process maps and metrics. Refer to this section when executing this phase of DMAIC.

(5) Two critical aspects of process mapping are:

(a) Use a cross-functional team made up of process stakeholders to draw the process map exactly as it exists. If the map is created in isolation, key elements of the process may be missed, such as extra steps, and any redundant work or rework loops. Always "walk the process" end-to-end to validate the accuracy of the process map.

(b) Create a data collection plan: Data to be collected should relate both to the problem statement and what the customer considers to be critical to quality. This data will be used as baseline data for your improvement efforts. Data should be graphed or charted to obtain a visual representation of the data. If the BRT was collecting error data, a Pareto Chart would be a likely graphical choice to help prioritize the BRT's efforts. A trend chart is needed to show how the process reacts over time.

1. Histograms are another excellent way to observe your process data.

2. Another widely utilized tool in the measure phase is a control chart. The control chart is both a visual depiction of a process and a statistical tool that shows which elements of variation are common causes (natural variation within the process) and special causes (variation caused by an external factor).

(6) Analyze. Now that data has been collected, it must be analyzed using any number of different approaches, depending on the situation. The third phase of the DMAIC process is the analyze phase, where the team sets out to identify the root cause or causes of the problem being studied. But, unlike other simpler problem solving strategies, DMAIC requires that the root cause be validated by data.

(a) Several root cause analysis methods are available for use in the analyze phase, including Brainstorming, 5 Whys, and the Fishbone Diagram. The BRT Work Package contains tools to complete root cause analysis brainstorming and the creation of a Fishbone Diagram.

(b) As with most root cause tools, the team should utilize the process map, the collected process data and other knowledge accumulated during the Define and Measure phases to help them arrive at the root cause.

(7) Validating the Root Cause. How does the BRT determine if the suspected root causes are really the answer? They must determine if these root causes were removed, a measurable impact would result. Validation must be conducted by analysis. The team must use current and accurate, data, frequency diagrams, concentration analysis, Pareto, and other analytical tools and let the data lead to the answer. Once the possible root causes are validated, these items should be categorized and populated into the Fishbone diagram.

(8) Improve. In this phase the team determines what actions need to be taken to move the metrics in the right direction. The objective of the DMAIC Improve phase is to determine solutions to the problems at hand. Brainstorming is commonly used to generate an abundance of potential solutions. People who perform the process regularly should be included in these discussions. Their input to solution creation is invaluable, and they may also provide the best potential solution ideas because of their process knowledge.

(9) Some prefer to conduct free-form brainstorming sessions, but with the addition of some simple rules for brainstorming a highly successful session will be conducted and you'll probably have some fun in the process.

(10) Selecting the Best Solution. Keep in mind that the term 'best' does not mean the same thing to all people. What the Barrier Removal Team should strive to find is the best overall solution. A solution criteria list is another good tool to assist in selecting the best solution. An example is shown below:

- (a) Time
- (b) Time to implement the solution
- (c) Cycle time reduction
- (d) Cost
- (e) Cost to implement
- (f) Process cost reduction
- (g) Miscellaneous
- (h) Defect reduction
- (i) Simplify the process

1. Another method for selecting root causes to address is the Impact and Difficulty assessment. The BRT Work Package provides a method to rank each possible cause and map it to a scatter chart. These rankings should have been accomplished when determining and validating root causes, but may also be completed during the 'Improve' phase. Based on the rankings, the BRT Work Package automatically creates the scatter chart depicting "Difficulty to Remove" on the 'X' axis, and "Impact of Removal" on the 'Y' axis. See figure A.11 below.

2. The BRT then evaluates the list of potential solutions against the list of criteria. Not only does this speed up the process of evaluation, but it also gives all team members the same basis for choosing the best possible solution.

(11) Validating the Selected Solution. Prior to implementation, the team must be assured that the selected solution(s) actually works. Pilot programs, computer simulations, and segmented implementation are all possibilities at this point. The team also creates a future state process map as part of the improve phase. This is done so that after implementation the team can once again walk the process to ensure the implementation was accomplished correctly.

(12) Control. The final DMAIC phase is the control phase; its objective, simply put, is to sustain the gains that were achieved as a result of the improve phase. The team should create a plan that

details the steps to be taken during the control phase. These might include:

- (a) Review and update the process map.
- (b) Update any affected work instructions.
- (c) Develop training that describes the newly implemented methods.
- (d) Determine new metrics and perform trend analysis to verify the effectiveness of new process.
- (e) Determine if the process changes can be effectively implemented in other processes.

NOTE: Once the control phase tasks have been completed, it is time to transfer ownership of the new process to the original process owner. The team should discuss with the facilitator any new potential project ideas that may have come up during the course of the BRT.

k. Gap Closure. The CR CFT is focused on closing gaps in performance within the KPIs. The implementation of a barrier removal process supports gap closure by identifying and removing barriers to performance. The results of this process should be observed in either the KPIs or the custom metrics created during the barrier removal process. Recognize that removing one barrier or eliminating one cause of a gap may not reduce an overall gap because there may be underlying issues with other systems or processes which will continue to affect overall performance. In this case a new barrier removal process should be executed to address the new issues.

l. Barrier Escalation Process. The Barrier Escalation Process is used when the BRT cannot remove a Barrier and requires input, assistance, or guidance by a higher rank/authority. Barriers can either be escalated through the Squadron CO, MAG CO, the Wing/TYCOM, or through the TMS Team to the CR CFT or NAE. One method of barrier escalation is through the NAE briefing cycle for the particular TMS. Barriers to performance are escalated as 'Issues and Actions' within these briefings. See Chapter 4 for a detailed description of the CR Readiness Management and Briefing Requirements. Each barrier or issue is address within the following categories:

- (1) Requested Decisions. Courses of action for resolution of a barrier where a flag decision is requested.
- (2) Recommended Action. Recommended actions requested of specific flag officers.
- (3) Risk Awareness. Impacts and vulnerability dates associated with specific risk.

(4) Actions in Progress. Milestones with dates or period of performance for each milestone.

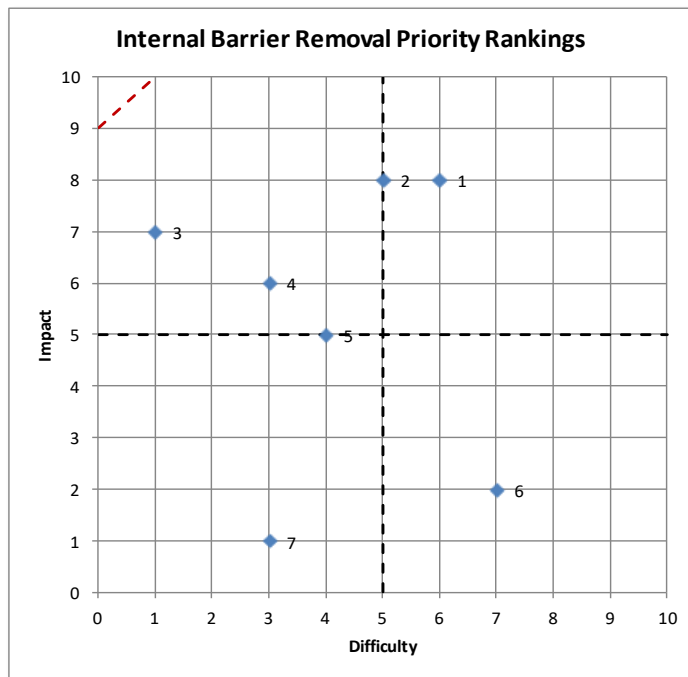


Figure A.11. Simple Barrier Identification

m. Barrier identification and removal is a continuous process. When barriers are discovered and must be escalated, it would be counterproductive to wait for the NAE briefing cycle to begin to raise them. TMS Teams should use a similar process to the NAE briefing cycle to escalate issues. For example, by the time an issue is ready for escalation (outside the TMS Team), that issue should be well known to the TYCOM, WSS, NAVAIR, or HQMC staff supporting the TMS Team. If the O-6 group is unable to resolve the issue, the next step would be to present a Flag-level brief using the CR CFT and Air Board briefing guidance. Flag-level briefings could be scheduled separately or in conjunction with other NAE Drumbeat meetings.

n. Additionally, the NAE and its sub-teams host weekly, bi-weekly, or monthly drumbeat meetings to discuss issues raised during the NAE briefing cycle and other topics of interest. It would certainly be appropriate to introduce issues, or ask for guidance/assistance at these meetings.

2. Action Item Management

a. Overview. CR uses the term "Action Item", or "AI" to describe issues arising through the normal course of operations which must be assessed, cataloged, managed, and disposed of in a formal and systematic manner. AIs often arise out of interactions between and

among team members, particularly at drumbeat/battle rhythm meetings, or as a by-product of working projects when it is discovered some additional action, beyond or in support of the action plan, are required. AIs may be identified by anyone on the team.

b. The CR CFT maintains an AI list partitioned into two sections: TMS AIs and CR AIs. The TMS AI list focuses on TMS specific AIs established through the periodic TYCOM Readiness Workshop or monthly CR Overview process. The CR AI list focuses on more systemic or cultural issues spanning multiple TMS Teams, across sub-teams (USMC TMS, USN TMS, CRT, ALWT), or across CFTs. TMS specific Actions Items, which have GO/FO attention, may also be elevated to the CR AI list or pushed down from the NAE AI list to the CR AI list.

c. Definition. An AI is a clearly defined and documented event, task, activity, or action to take place within a specified timeframe having measurable results. AIs are discrete work statements handled by a single person, group, or team. The AI statement must focus on providing value-added deliverables which support NAE SO or Strategic Initiatives (SI). AIs vary in magnitude and scope, may be administrative in nature, or require substantial work to complete. Their actions range from forwarding specific information to someone, arranging a meeting and providing a quick estimate on a piece of work, to long-term strategy and process development.

d. Characteristics. AI statements have the following characteristics:

- (1) A well-defined problem statement
- (2) A defined deliverable
- (3) A defined due date
- (4) Sufficient resources required
- (5) Set of successful completion criteria
- (6) Based on results, not activity

d. General Responsibilities

(1) Action Items (AI) Coordinator. The AI Coordinator for the NAE is the Deputy Chief of Staff for NAE at CNAF. Responsibilities include:

- (a) Lead periodic reviews of AI lists
- (b) Assign AIs to the appropriate person or entity (Center of Gravity/COG)

(c) Facilitate conversation between AI Leads and other entities to help drive the completion of AIs.

(d) Review active and backlogged AIs regularly to ensure continued relevancy.

(e) Ensure that AI business rules are used regularly and are still appropriate.

(f) Monitor the turnaround time for AIs; make adjustments in resourcing when warranted.

(2) Action Item(AI) Lead. AI Lead responsibilities include:

(a) Coordinate work/form teams to accomplish the AI and develop deliverables.

(b) Lead periodic reviews of work accomplished on the AI

(c) If necessary, develop metrics to monitor the progress or status of the AI.

(d) Provided periodic feedback to the AI Coordinator via participation in scheduled DCAO and CR AO telcons.

(3) Action Items Log Custodian. AI Lead Log Custodian responsibilities include:

(a) Maintain the master copy of the AIs Log.

(b) Collect and integrate to the Log AIs and AI updates.

(c) Publish the AIs Log prior to the periodic AI reviews.

e. Action Items Management. The CR CFT conducts weekly meetings to discuss and review AI status. By actively managing AIs time to complete and wasted resources are decreased and prevent responsible parties from losing interest. To increase the likelihood that AIs will be completed on time, AIs must be assigned to a specific leader, have realistic target dates, and be the subject of active follow-up. A well-defined AI will eliminate "scope creep," which can also negatively impact time to complete or assignment of resources. If an AI is not completed in a reasonable timeframe, consideration should be given to revising the scope, elevating the issue to the next higher level, or eliminating the AI if it is not attainable.

(1) Assessing Action Items. When AIs are received and placed in the Incoming AI list, the AI Manager has several courses of action prior to activating the AI. These include:

(a) 'Reject' AI. Deliverable not defined, Poor fit, strategically/tactically, Substitute process, or does not add value.

(b) 'Redefine' AI. Simplify complex AIs, Negotiate due dates, Redefine deliverables to reduce NVA or Substitute Process Content or to get a fit with Strategy and Tactics.

(c) 'Backlog' AI. Leave on incoming list, Rationalize priorities, Activate AIs from incoming when active AI is completed, Pull highest priority from incoming.

(d) 'Activate' AI. Begin work.

(e) 'Complete' or 'Kill' AI. Work on the AI is completed and briefed out, as required, would be redundant to current actions, or is not required.

(2) Categorizing Action Items. When categorizing, AIs fall under five different categories:

(a) Value-Added. - Identifies an issue that must be resolved in order to meet strategic or tactical goals. The completion of this AI will benefit the organization.

(b) Non-Value-Added. - Does not contribute to strategic or tactical goals, customer responsiveness, or wastes strategic resources. Can be eliminated immediately.

(c) Regulatory. - May be considered Non-Value-Added by the organization, but is necessary to do business

(d) Substitute Processes - Barrier. Required to make the process work and should not be removed until the related barrier is removed.

(e) Substitute Processes - Functionally Driven. Requests the institution of a Substitute Process instead of focusing on dealing with the prime process. Can be eliminated immediately.

(3) Validating Action Items. AI Managers should ensure teams are working on the right things, that the action is within the scope of the team, and monitor if the AI will result in realized improvements as recognized within the key or supporting metrics. When making decisions about the validity of an AI, the AI Manager should consider the following:

(a) Is the AI a strategic fit?

(b) Does the AI add value?

(c) If either is "No", redefine AI or discard

(d) If either is "Yes", define "value add" as either:

(e) Simple: high, medium, low priority

(f) Detailed: large payback, short time-to-complete, small effort to complete

(4) Action Item Flow. AIs remain in the 'Incoming' section of the AI Log until it is actively being worked by the AI COG. The AI is then recorded into the 'Active' list and given a due date. As AIs are completed, the AIs are documented as being completed and the item is moved to the 'Complete' section of the AIs Log. Figure A.12 depicts the general flow of AI management.

f. Action Items Log

(1) Overview. Documenting AIs is a critical part of any large or small project. AIs that are inadequately described, inaccurately characterized or left unaddressed may delay portions of a project, create unnecessary work, or holdup deliverables and generally impede the smooth operation of the organization.

(2) Management. Once an AI has been identified, a statement describing the action to be taken must be crafted and captured in the meeting notes. As previously stated, an AI must be clearly defined and must focus on an outcome or deliverable that fit strategic or tactical goals of the organization and be value-added. The AIs Manager (or a designated person) will designate an AI Lead and the AIs Log Custodian will ensure the AI is added to the 'Incoming' section of the AIs Log.

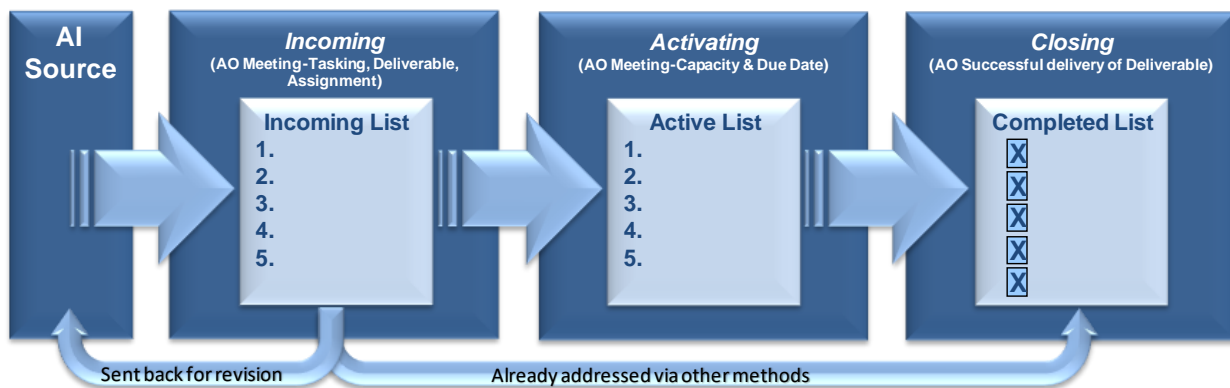


Figure A.12. Action Items Flow

(3) Responsibilities. The AI Log Custodian is primarily responsible for collecting AI updates and providing the AIs Log prior to reviews. AIs should be reviewed during drumbeat meetings to update the status and determine if the AI is still valid or could be moved to the 'Complete' section.

| CR AI No. | NAE No. | TASK NAME DELIVERABLE | STATUS | ASSIGNED SOURCE | ASSIGNED DATE | TODAY'S DATE | AGE | CURRENT DUE DATE | LEAD | TEAM |
|-----------|---------|--|---|-----------------|---------------|--------------|-----|--|----------------------------|-------|
| TMS-227 | | Description: Develop/execute a F402 engine production goal and material requirements plan to meet the long range goal of reaching PRG of 24 months and sustaining until aircraft sundown. Deliverable: Develop/execute a F402 engine production goal and material requirements plan to meet the long range goal of reaching PRG of 24 months and sustaining until aircraft sundown. | 04/12/10: Briefing April M&SCM & CR CFT on April 29. 02/22/10: Changed reporting date to April CR CFT 29APR10. 02/08/10: On track. 01/25/10: On track per M&SCM. 01/11/10: On track. Lt. Col. Short will brief in March. 01/04/10: On track. 12/21/09: On Track. 10/26/09: No change. 10/19/09: Reported at the SEP CR CFT. RADM O'Hanlon requested an update in six months. 09/21/09: Update provided at the 05OCT09 CR CFT. | 19AUG AV-BB AB | 9/22/08 | 4/19/2010 | 567 | 12/16/2008 05/30/09 04/29/10 | Lt Col Short | M&SCM |
| TMS-228 | | Description: Develop/implement end-to-end analysis of consumable supply chain management plan to support AV-BB until sundown. Deliverable: Develop/implement end-to-end analysis of consumable supply chain management plan to support AV-BB until sundown. | 04/12/10: Briefing April M&SCM & CR CFT on April 29. 02/22/10: Changed reporting date to April CR CFT 29APR10. 02/08/10: ON track to brief at the April 2010 CR CFT. 02/03/10: DLADSCR has the lead on CR CFT AI #228. Subject AI is currently being worked via the Harrier Alignment Working Group (HAWG)/Material Working Group (MWG) as HAWG MWG AI #8. During our update to RADM O'Hanlon on 19 Oct 2009, he requested that DLADSCR provide an update to the CR CFT in six months, which would be April 2010. DLADSCR will provide an update to the subject AI during the April 2010 CR CFT. | 19AUG AV-BB AB | 9/22/08 | 4/19/2010 | 567 | 12/16/08 7/1/09 04/29/10 | CAPT Dixon CAPT O'Brien | M&SCM |
| TMS-230 | | Description: Review aircraft induction, engineering review, material requirements determination and repair processes to identify opportunities to reduce AV-BB PM1-1 and PM1-2/3 aircraft repair TAT. Deliverable: Identify opportunities to reduce AV-BB PM1-1 and PM1-2/3 aircraft repair TAT. | 04/12/10: Briefing April M&SCM & CR CFT on April 29. 02/22/10: Changed reporting date to April CR CFT 29APR10. 02/08/10: On track to brief at the March CR CFT. 01/25/10: On track. 01/11/10: On track. 01/04/10: On track. 12/21/09: On Track. 11/23/09: Need to get an update. 11/21/09: On Track. | 19AUG AV-BB AB | 9/22/08 | 4/19/2010 | 567 | 12/16/2008 01/20/09 02/17/09 05/14/09 09/30/09 04/01/10 04/29/10 | CAPT Dodges | M&SCM |
| TMS-232 | | Description: Provide a 6 month follow-up on AV-BB HISS PBL status. Deliverable: Brief the 6 month status follow-up. | 04/12/10: Briefing April M&SCM & CR CFT on April 29. 02/22/10: Changed reporting date to April CR CFT 29APR10. 02/08/10: On track. 01/25/10: On track. 01/11/10: On track. 01/04/10: On track. 12/21/09: On Track. 10/26/09: No change. 10/19/09: Reported at the SEP CR CFT. RADM O'Hanlon requested an | 29OCT08 CR CFT | 10/29/08 | 4/19/2010 | 530 | 4/1/2009 09/30/2009 04/01/10 04/29/10 | LCDR Sherman | M&SCM |

Figure A.13. Action Items Log: Example

(4) Tracking. The CR CFT maintains AI logs to track the progress and completion of AIs. The AIs Log Custodian is responsible for collecting, and updating the AIs.

(5) Elements. All CR AI Logs shall contain the following elements at a minimum:

(a) 'Team Name' AI number (i.e. 'CR 121") - A sequential number identifying the AI.

(b) TASK NAME - A specific description of the task to be accomplished or the issue to be addressed.

(c) STATUS - Current and historical information about the status of the AI.

(d) DELIVERABLE - Specific desired outcome to the action.

(e) ASSIGNED SOURCE - The person, meeting, or entity that assigned the AI.

(f) ASSIGNED DATE - The date the AI was assigned.

(g) AGE - The elapsed number of days since the AI was assigned.

(h) CURRENT DUE DATE - The Date the AI is scheduled to be complete. This date may be modified if more time is required to complete the task.

(i) LEAD - The name of the person or group leading the AI.

(j) TEAM - The team designated to lead closure of the AI.

(6) Configuration. AI Logs shall be configured the in the following manner:

(a) Incoming. A newly generated AI. During a meeting it will be determined that an action must be taken to resolve an issue. The custodian will record this into the AI Log. All the pertinent information may not yet be available such as who will be responsible for the AI. The description of the action may need to be revised, or determined if it is even valid.

(b) Active. AIs that are currently being worked.

(c) Complete. A historical record of all completed actions.

3. Process Improvement Tools

a. AIRSpeed. AIRSpeed is the NAE enabler for operationalizing cost-wise readiness across the NAE. AIRSpeed is used for the purposes of:

- (1) Identifying and addressing interdependencies
- (2) Managing and reducing variability
- (3) Identifying and managing constraints
- (4) Eliminating waste to properly manage aircraft ready for tasking

b. Continuous Process Improvement (CPI). AIRSpeed integrates best business practices, which includes Basic and Advanced TOC, Lean and Six Sigma. The program emphasizes continuous process improvement (CPI) in the Naval Aviation culture. The process affects the Naval Aviation Organizational-Intermediate-Depot supply chain and links back to NAVRIIP. Rollout is occurring throughout the entire NAE. In-depth information about AIRSpeed may be found on the MyTeam.NAVAIR.Navy.mil website in the 'AIRSpeed' community.

(1) Theory of Constraints (TOC). TOC is a set of tools that examines the entire system for continuous process improvement (CPI) based on the belief that any organization has at least one constraint and that any improvements on non-constraints may not yield as significant Return on Investment as working on the constraint.

(a) Basic Theory of Constraints (BTOC) is a process improvement tool under AIRSpeed that is applied at Aircraft

Intermediate Maintenance Departments, Aviation Supply Departments, and Marine Air Logistics Squadrons.

(b) The primary concept underlining Advanced Theory of Constraints is the application of market-demand-pull supply chain management. In the current system, components and parts are "pushed" to the end users. In aircraft intermediate maintenance activities, components are inducted regardless of whether they are required. In the "pull" system, actual flight-line demand (operational requirements) and the time it takes to reliably replenish parts dictates inventory buffer levels and times to induct components into the repair process.

(2) LEAN. Lean is a focus on the removal of waste, which is defined as anything not necessary (no value added) to produce the product or service. Lean is a process improvement strategy that facilitates an organization's ability to make everything, every day in the exact quantity required, with no defects. The goal is to achieve perfection through the total elimination of waste in the value stream. Lean uses incremental improvement to constantly expose waste to balance operational and standard workflows. Most notable examples are the supply chains established by Toyota and Honda.

(3) Six Sigma. Six Sigma is a strategy based on the assumption that the outcome of the entire process will be improved by reducing the variation of multiple elements. It is a process improvement strategy that uses quality improvement as the method for business improvement. Six Sigma is uniquely driven by close understanding of customer needs, disciplined use of facts, data, statistical analysis, and diligent attention to managing, improving, and reinventing business processes. Process improvements focus on variation reduction to produce highly repeatable processes that create customer satisfaction. Six Sigma measures variability in relation to a total population of numbers.

Appendix B

COST GAP ANALYSIS

1. Naval Aviation Enterprise (NAE) Chief Financial Officer (CFO) and Board of Directors (BOD). In November 2017 the NAE Chief Financial Officer and Board of Directors charter was signed and the appropriate positions were assigned.

a. Background. A core group of key government personnel came together to form a new set of financial planning and reporting processes that would be more responsive and transparent to the needs of the entire aviation community for both the Navy and Marine Corps. This was the beginning of the NAE Chief Financial Officer (CFO) Board of Directors (BOD). This entity ensures timely delivery and analysis of NAE financial data to support effective decision making to sustain Fleet readiness and deliver war-fighting requirements. The NAE is committed to a dynamic partnering effort that will advance the relevance and efficiency of Naval Air Forces with a mission of delivering the right force...at the right readiness...at the best cost...today and in the future.

b. Mission Statement. The NAE CFO BOD is responsible for tracking requirements, resourcing and execution of Naval Aviation's readiness accounts and providing the NAE leadership analysis and recommendations designed to optimize NAE readiness resources to deliver current and future readiness within Naval Aviation.

c. Objectives

(1) Track readiness requirements and associated resourcing through the Planning, Programming, Budgeting, and Execution process.

(2) Collect, report, analyze and facilitate the exchange of financial data from a focused enterprise view to support NAE readiness goals.

(3) Support NAE leadership on financial matters which will enable the NAE to speak with one voice on Navy and Marine Corps aviation financial issues.

(4) Ensure transparency of resource planning and execution through an annual report that details past year execution and future year planning. Periodic status updates will also be provided throughout the year.

d. Scope. In support of the NAE, the CFO BOD will provide a range of support activities to the BOD and stakeholders. This support will focus on the main objectives of the CFO which are to be the chief communicator of financial information to all members of the NAE, to facilitate exchange of financial information between all stakeholders, to make recommendations to NAE leadership on financial matters, to

collect, analyze and report financial information from an NAE perspective and to develop processes and positions as required on financial matters that enable the NAE to speak with one voice.

Specifically the CFO BOD will collect existing data and reports from all areas of the NAE that provide information on execution of current year budget. This will include an NAE financial baseline, process flow, evaluation of variance from the baseline and an assessment of progress vs. plan. In addition, the CFO BOD will work with all members of the NAE to provide data and support financial analysis required to achieve NAE goals. In the area of our year planning, the CFO BOD will provide the EXCOMM reports describing the status and significant changes to the Program Objective Memorandum (POM) during its development, including an assessment of bill allocation, endgame strategies, SPP health and risk assessment. In addition, the CFO BOD will coordinate seams issues with OPNAV sponsors and provide the EXCOMM with an assessment of the impact of budget assumptions during execution in order to correct future budget planning cycles. Finally, in support of its role as chief communicator of financial information, the CFO in concert with the CFO BOD will provide recommendations and advise to NAE leadership on financial matters and provide regular reports summarizing the status of budget execution and planning for the entire NAE. The CFO BOD will also develop and carry out financial processes that will assist the NAE in optimizing performance.

2. Cost Analysis Team:

a. Overview. The CAT is structured in four tiers designed to provide integrated, full-spectrum cost visibility, analysis, and counsel to TMS Team Leads to enable more effective management and understanding of cost elements as they relate to the production of readiness.

b. CAT Structure. The CAT structure and associated analysis processes are designed to provide these benefits:

- (1) Empowers TMS Logistics Lead as the TMS cost voice/expert.
- (2) Detailed cost explanations, expertise, and visibility in direct support of each TMS Lead and Team.
- (3) Standardization and unity of effort within and between TMS Teams, Marine Air Wings, and Marine Forces Commands.
- (4) Integration of cost-related subject matter experts into the CR process, in support of TMS Team battle rhythms, and to provide appropriate training.
- (5) Provides a stratified level of effort and level of expertise (Tiers 1-4).

(6) Ensures communication at all levels with regards to cost.

(7) Puts the right Marines in the right place at the right time.

(8) Provides for a more comprehensive and integrated cost management process.

(9) Establishes a requirement for MARFOR and MAW ALD / Comptroller involvement within NAE processes.

c. CAT Organizational Relationships. To efficiently support the TMS Teams, MARFOR and Wing level cost responsibility shall utilize the same lead/follow relationships:

(1) MARFORCOM/2nd MAW leads: CH-53E, EA-6B, AV-8B, UAS, and MV-22

(2) MARFORPAC/3rd MAW leads: F/A-18, H-1, KC-130J AC, and F-35B

(3) MARFORRES/4th leads: KC130J/T RC and F-5

USMC Cost Analysis Team Construct

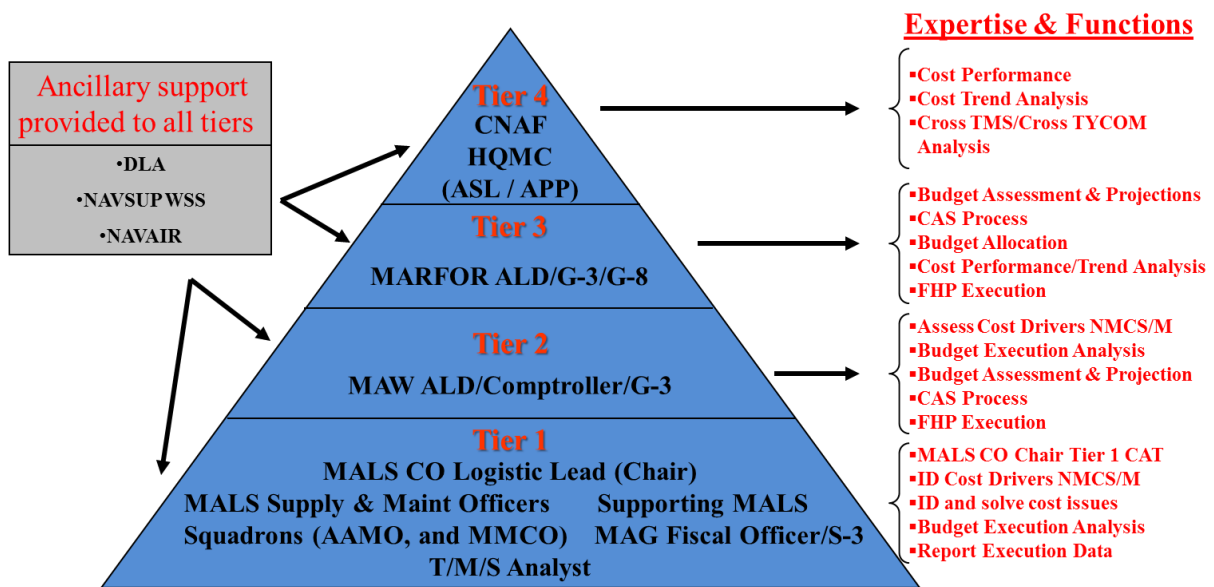


Figure B.1. Cost Analysis Team

d. CAT Support Entities. The following organizations provide information to assist the TMS Lead in understanding cost issues and requirements:

(1) Naval Supply Systems Command, Weapons System Support (NAVSUP WSS). NAVSUP WSS provides the APC and Annual Price Index to address price increases/decreases and the justifications behind those changes.

(2) Commander, Naval Air Forces (CNAF) N42A. CNAF N42A provides a focused current year assessment and interactive analysis and challenge of the Marine Corps cost and demand change outlier issues as they relate to AVDLR and Consumables (AFM), as well as reporting aggregated TMS wide bottom line fuel (FF) and contracted repair (FW) cost.

(3) IRMT. IRMT provides NAE EXCOMM Air Boards and associated parties with an understanding of the cost variances between execution and budget by TMS.

3. Guidance:

a. Analysis and Charts. The Cost Gap Analysis charts and processes detailed in this Appendix will be used to explain cost performance; EI at the TMS level, and Cost Performance Index (CPI) at the MARFOR and Wing level. Additionally, Schedule Performance Index (SPI) will be included to link planned and actual costs with flight hour execution.

b. Battle Rhythm. The Cost Gap Analysis charts shall be developed and submitted as part of each TMS Team's monthly battle rhythm. Each TMS will submit their Cost Gap Analysis to CNAF and HQMC (APP/ASL) as part of the USMC CR Top KPIs per a schedule that will be promulgated separately.

(1) Vetting. Cost Gap Analysis charts will be vetted through the chain of command and submitted ONLY by the TMS Leads respective MARFORs to HQMC APP/ASL and CNAF N42 monthly. Cost Gap Analysis charts will be combined by TMS Teams within each MARFOR monthly submission. See figure B.1.

(2) Marine Forces (MARFOR) Perspective. Cost Gap Analysis charts will be developed to show a drill down to each respective MARFOR for both TACAIR and FRS in order for the respective MARFOR to better understand and manage their costs for their respective Budget Submission Office and aid in Cost Variance reporting to OPNAV N43 & N98 at the end of FY.

c. Annual Cost Brief. To aid in understanding budgeting and pricing influences, a joint CNAF/APP/MARFOR/NAVSUP brief will be provided to each TMS at the beginning of the FY. This brief shall provide SBTP and Overseas Contingency Operations hours budgeted for, budgeted cost per hour, Value Added Demand (VAD) rate applied, and any other relevant FY flight hour program information.

Monthly Process

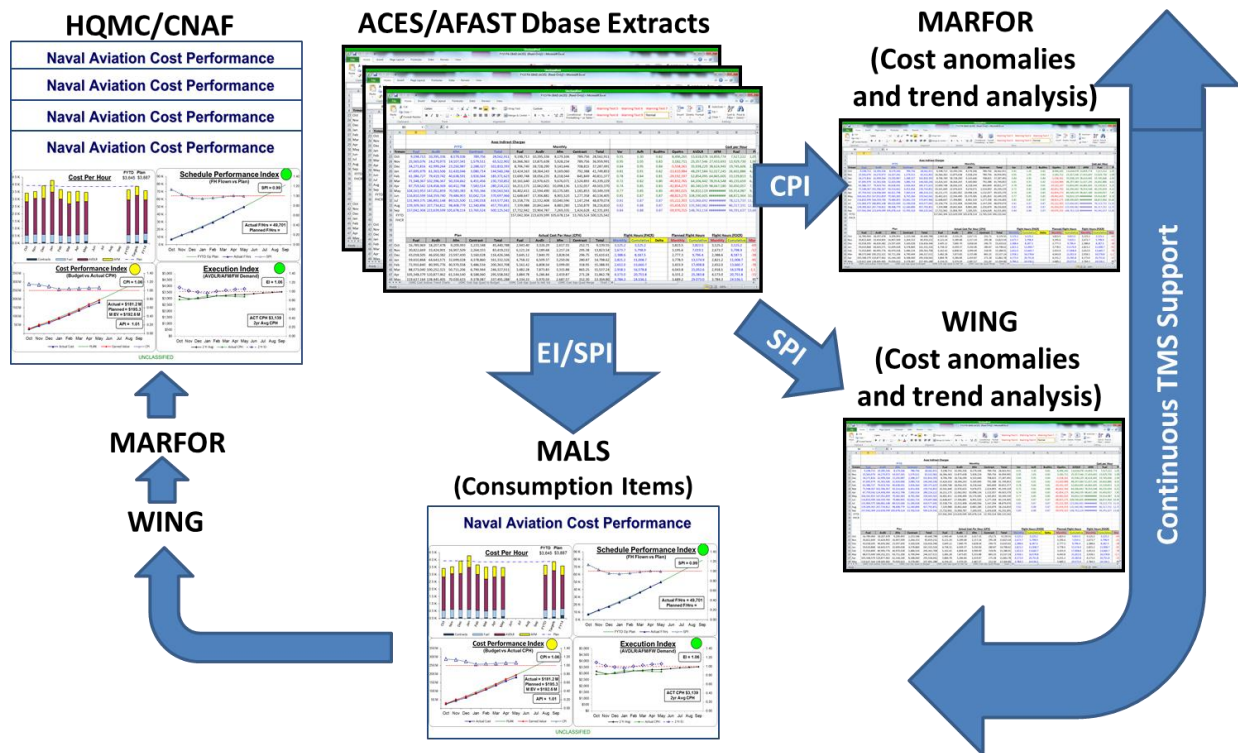
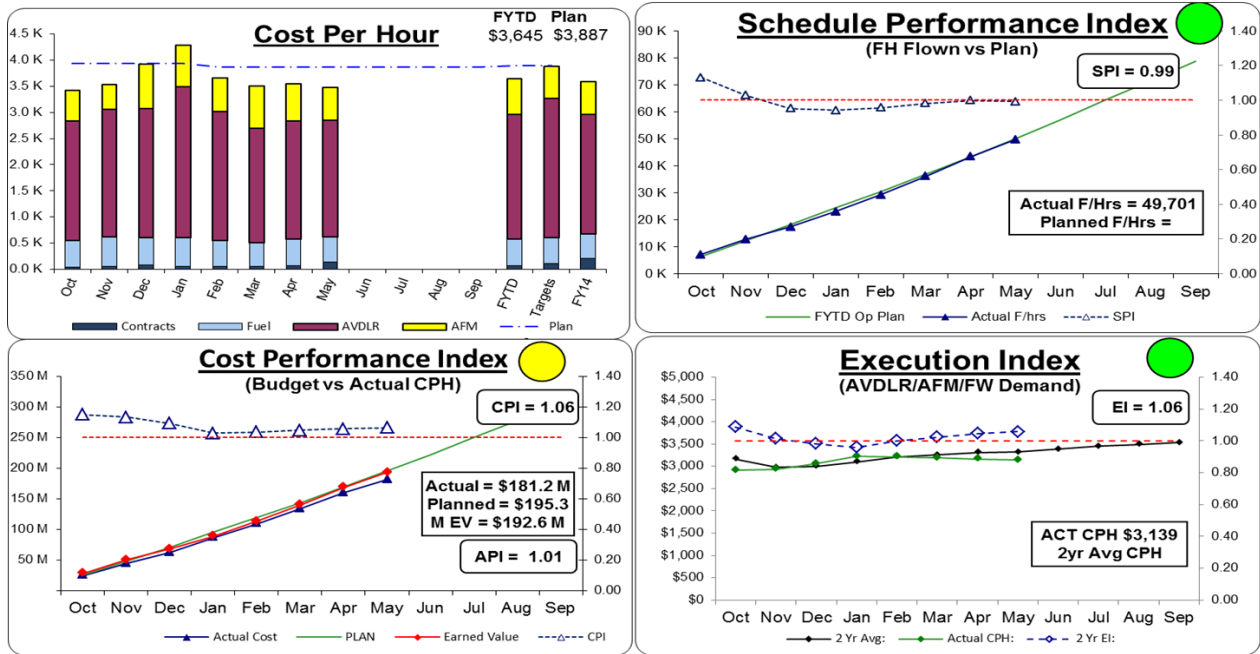


Figure B.2. Cost Brief Process

4. Cost Gap Analysis Reports:

a. Type/Model/Series (TMS) Cost Gap Analysis. The monthly TMS Cost Gap Analysis submission shall consist of a minimum of two slides. The first Cost Performance panel (figure B.2) depicts Schedule Performance, Execution, and Cost Per Hour indices. This panel will also be included in all TMS NAE and MAERB briefs. "Stoplight" guidance for the indices is provided in figure B.3. The second Cost Analysis panel (figure B.4) depicts the four elements of flying hour program cost: AVDLR), AFM, Fuel, and Contracts. It provides reasons/explanations for costs and root causes of the behavior that drives these reasons. "Stoplight" guidance for the cost elements is provided in figure A-5. Additional cost or schedule analysis slides should be included as appropriate to provide thorough cost analysis.

Naval Aviation Cost Performance



UNCLASSIFIED

Figure B.3. Type/Model/Series (TMS) Cost Gap Analysis Chart

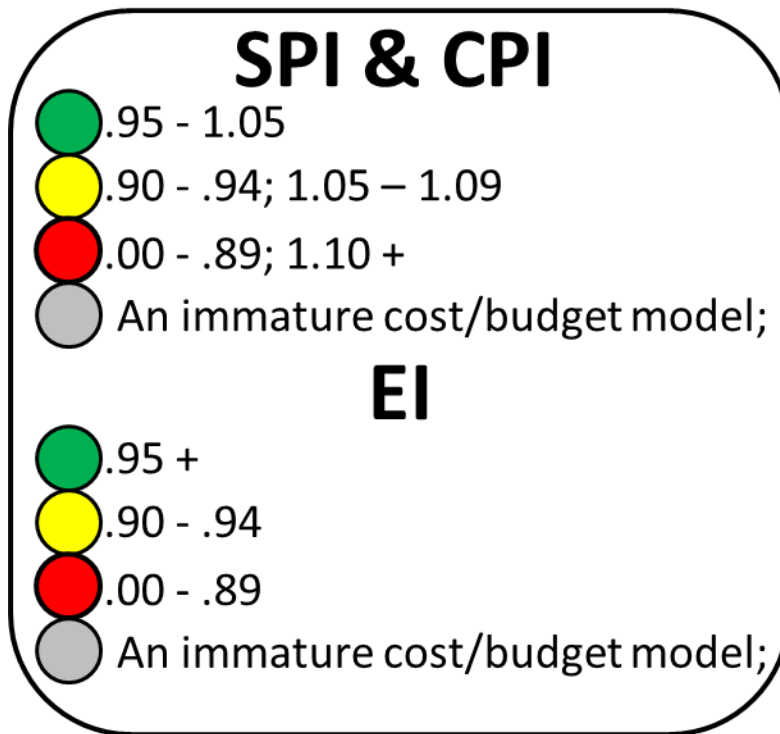


Figure B.4. EI, CPI, SPI Stop Light Chart Values

TMS Cost Elements

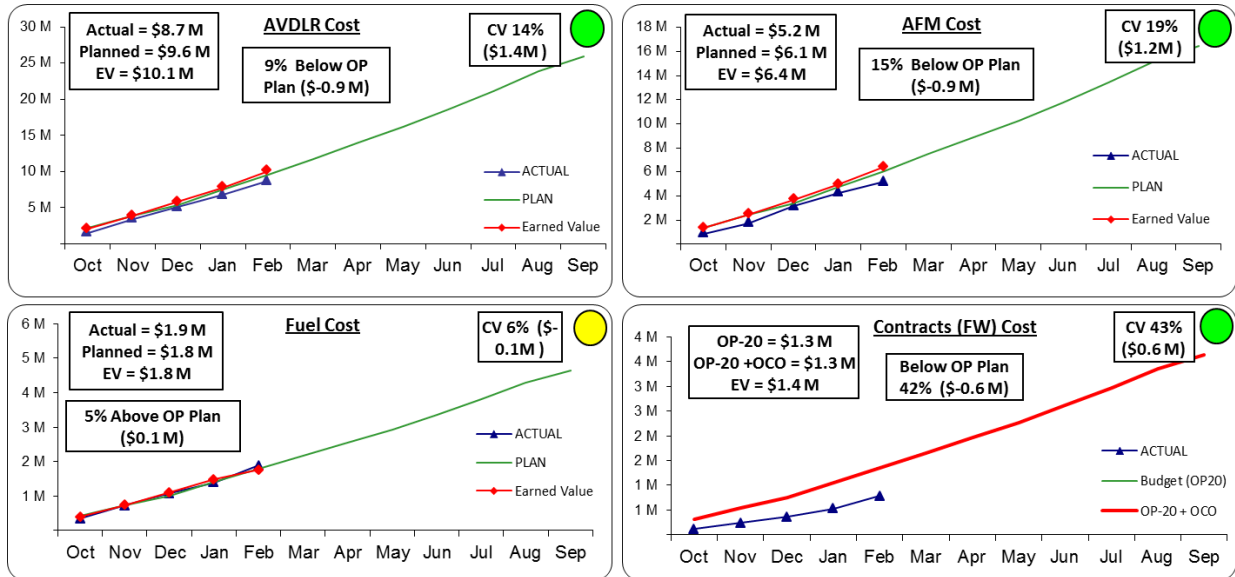


Figure B.5. Type/Model/Series (TMS) Cost Elements Chart

b. Individual Index charts

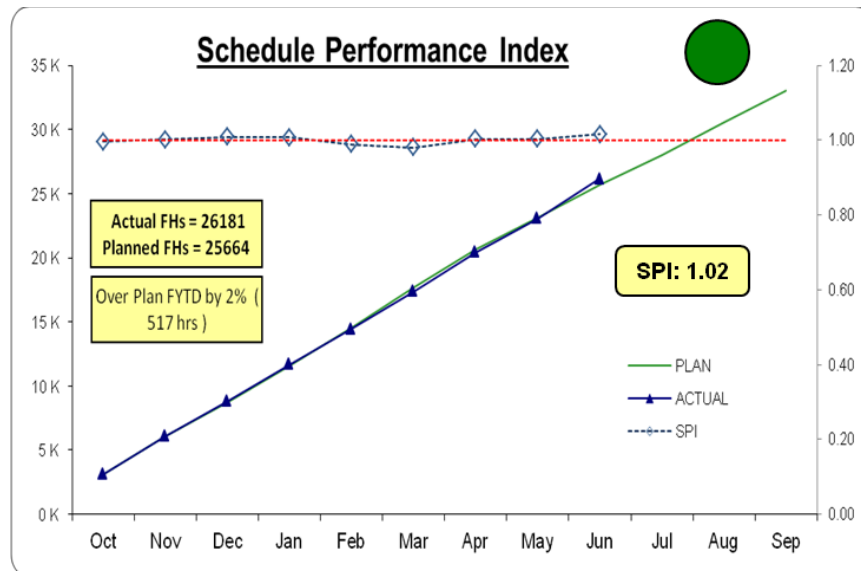


Figure B.6. Schedule Performance Index Panel

(1) Schedule Performance Index (SPI). The Schedule Performance Index panel (figure B.6) charts actual and planned flight hours as well as the SPI (actual/planned hours) and a 1.00 SPI baseline. This panel is from the TMS ACES charts and is updated

monthly. OCO grant adjustments to the plan are normally included in each monthly update.

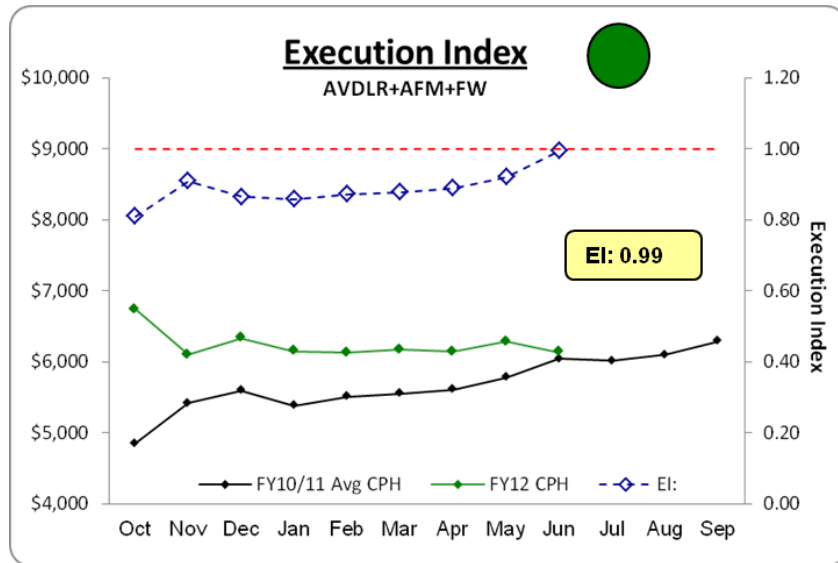


Figure B.7. Execution Index Panel

(2) EI. The Execution Index panel (figure B.7) charts current year actual cost per hour (excluding fuel) against an average cost per hour (excluding fuel) for the two prior years, at the same year-to-date monthly point, in current year dollars. It also charts the EI (current year CPH / two year average CPH) and a 1.00 EI baseline. EI allows a TMS to view current year cost performance against recent historical actual performance, separate from the budget. EI will not accurately account for new TMS weapons systems or any upgrades that result in significant new costs not included in the two year historical average used to calculate it. For this reason, CPI should also be used with EI to fully understand cost performance.

(3) CPI. The Cost Performance Index (CPI) panel (figure B.8) charts current year actual total cost, EV (budgeted cost x actual flight hours) and total budgeted cost. The panel also charts the CPI (EV/total cost) and a 1.00 CPI baseline. CPI allows a TMS to view current year cost performance against budgeted cost and flight hour plans. Unlike EI, budgeting changes made to account for new TMS weapons systems or any upgrades that result in significant new costs will be included in the CPI calculation. For this reason, CPI and EI should both be considered to fully understand cost performance.

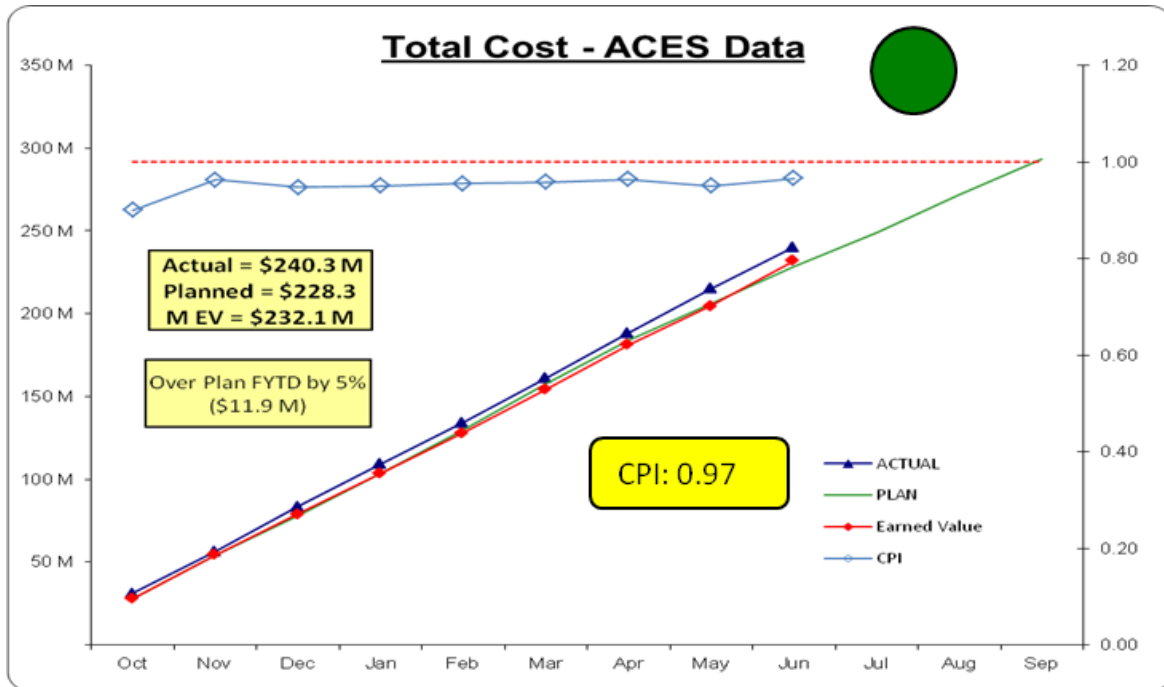


Figure B.8. Cost Performance Index Panel

Effects on SPI

- Flightline Gap and OOR status has not effected TMS from executing the SBTP. TMS is on track with no flight hour issues.

Effects on CPI/EI

- Increased engine repair costs are impacting both CPI and EI. Additionally, the pricing on specific engine components currently being used in the repairs decreased by less than the Value Added Demand adjustment used in the OP-20 budget target and EI calculations.


Root Causes/Behavior Driving the Reasons

- Due to the decreased OP-20 budget, increased engine repair, and the relative increase in the cost of engine components, the TMS is executing at 3% over the OP-20 target; CPI = 0.97
- Due to differences in FYTD cost patterns when comparing FY12 with FY10/11 average, increased engine repair, and the relative increase in the cost of engine components; EI = 0.99

Figure B.9. Example of Schedule Performance Index (SPI), CPI and EI Relationships


(4) Type/Model/Series (TMS) Gap Analysis. A high-level explanation of factors impacting the three primary indices should be provided on the TMS Gap Analysis slide.

Appendix C

|  STANDARDS CHANGE FORM HQMC Standards Enclosure Change Request Form | |
|---|--|
| <i>Revision 1.0</i> | |
| Instructions: | |
| Describe the proposed changes in the appropriate space below and forward this, with the Readiness Standard changes (TMS-specific Excel Spreadsheet), to HQMC via the TMS Lead, Wing, and MARFOR representative. | |
| Name/Rank/Organization Originator: | Change Request Submitted Date: |
| (RS&P Metrics Team Use) Change Request Number: | Change Request Disposition Date: |
| Standard Name: | Check One <input type="checkbox"/> New Standard <input type="checkbox"/> Revised Standard |
| Reason For Change Request: | |
| Summary of Changes: | |
| HQMC Use Only | |
| Change Request Approved/Disapproved Date: | Change Number: |
| Check One <input type="checkbox"/> Approved <input type="checkbox"/> Disapproved (reason below) | |
| Comments: | |

(This page intentionally left blank)

Appendix D -

|  METRICS CHANGE FORM Current Readiness Metrics Measurement Change Request Form | |
|--|---|
| <i>Revision 1.0</i> | |
| Instructions: | |
| Describe the proposed change in the appropriate space below and forward to the Assistant Director, RS&P via the TMS Current Readiness representative. | |
| <small>Name/Rank/Organization</small> Originator: | <small>Change Request Submitted</small> Date: |
| <small>(Metrics Team Use)</small> Change Request Number: | <small>Change Request Disposition</small> Date: |
| Chart Name: (Cockpit Chart Title) | <small>Check One</small> Classified Data? <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Panel Name: | |
| Panel Line Name: | |
| Reason For Change Request: | |
| Measurement Definition. Proposed Change: | |
| Calculation. Proposed Change: | |
| Source Data And Reporting Frequency For Measurement. Proposed Change: | |
| Basis For Entitlement. Describe Proposed Change: | |
| <small>Name/Rank/Organization</small> MCCB: | <small>Change Request Approved/Disapproved</small> Date: |
| <small>Check One</small> <input type="checkbox"/> Approved <input type="checkbox"/> Disapproved (reason below) | |
| Comments: | |

(This page intentionally left blank)

ACRONYMS

A

| | |
|--------|--|
| ACC | Aircrew Core Competency |
| ACES | Aviation Cost Evaluation System |
| AFAST | Aviation Financial Analyst Support Tool |
| AFM | Aviation Fleet Maintenance (Consumable Parts/Supplies) |
| AI | Action Item |
| ALD | Aviation Logistics Department |
| ALM | Aircraft Life Management |
| ALWT | Air Launched Weapons Team |
| AMSRR | Aviation & Maintenance Supply Readiness Reporting |
| AOM | Aviation Operations and Maintenance |
| APC | Annual Price Change |
| APML | Assistant Program Manager for Logistics |
| APP | Aviation Plans and Programs (HQMC) |
| APW | Aviation Weapons Requirements (HQMC) |
| APX | Aviation Expeditionary Enablers (HQMC) |
| ASD | Aircraft Status Dashboard |
| ASM | Aviation Manpower and Support (HQMC) |
| ASM | Advanced Skills Management |
| ASL | Aviation Logistics (HQMC) |
| ASB | Aviation Standards Branch (TECOM) |
| AVDLR | Aviation Depot Level Repairable (Repairable Parts) |
| AVPLAN | Aviation Plan (USMC Annual Aviation Plan) |

B

| | |
|------|---|
| BCMI | Beyond Capable Maintenance Interdiction |
| BFM | Basis For Measurement |
| BoD | Boots on the Deck |
| BoG | Boots on the Ground |
| BRT | Barrier Removal Teams |

C

| | |
|--------|--|
| CAT | Cost Analysis Team |
| CILR | Critical Item Logistics Review |
| CFT | Cross-Functional Teams |
| CMMR | Core Model Minimum Requirement |
| CNAF | Commander Naval Air Forces |
| CNAL | Commander Naval Air Forces, Atlantic |
| CNAP | Commander Naval Air Forces, Pacific |
| COMFRC | Commander Fleet Readiness Center |
| CONUS | Continental United States |
| CpC | Cockpit Chart |
| CPFH | Cost per Flight Hour |
| CPI | Cost Performance Index |
| CPI | Continuous Process Improvement |
| CPIMS | Continuous Process Improvement Management System |
| CR | Current Readiness |

CR CFT AO CR CFT Action Officer
CR CFT Current Readiness Cross-Functional Team
CR ESC Current Readiness Executive Steering Committee

D

DC(A) Deputy Commandant for Aviation
DCAO Directors, Coordinators, and Action Officers
DLA Defense Logistics Agency
DMAIC Define, Measure, Analyze, Improve, and Control
DMS Directed Mission Sets
DRRS Defense Readiness Reporting System
DRRS-MC Defense Readiness Reporting System - Marine Corps

E

E2E End To End
EAS Enterprise AIRSpeed
ECC&D Enterprise Capability, Consolidation and Divestiture
EI Execution Index
ELAT Enterprise Logistics Analysis Tool
ELT Executive Leadership Training
EM Expansion Module
EM&SCM Engineering, Maintenance, & Supply Chain Management
EMV Enhanced Mohave Viper
EOC Equipment Operational Capability
EOS Executive Off-Site
EOY End of Year
EPAT Enterprise Project Alignment Tool
ERMS Electronic Retrograde Management System
ERP Enterprise Resource Planning
ESC Executive Steering Committee
ESS Executive Supportability Summit
EV Earned Value
EVM Earned Value Management
EXCOMM Executive Committee

F

FAST Fleet Analysis Support Team
FCF Functional Check Flight
FHP Flight Hour Program
FISP Fly-In Support Package
FMC Full Mission Capable
FPY First Pass Yield
FR Future Readiness
FRC Fleet Readiness Center
FR CFT Future Readiness Cross-Functional Team
FRS Fleet Replacement Squadron
FW Fixed Work (Contract Costs)
FY Fiscal Year

G

GFM Global Force Management
GO/FO General Officer / Flag Officer

H

HQMC Headquarters Marine Corps

I

ILS Integrated Logistics Support
ISR In-Service Repairs

J

K

KPI Key Performance Indicators

L

LCWR Logistics Cost War Room

M

MAERB Marine Aviation Executive Readiness Board
MAG Marine Aircraft Group
MARFORCOM Marine Forces Command
MAW Marine Aircraft Wing
MC Mission Capable
MCMRBA Mission Capable, Non-Ready Basic Aircraft
MET Mission Essential Tasks
METL Mission Essential Tasks List
MS Mission Systems
MSG Maintenance Steering Group

N

NAE Naval Aviation Enterprise
NALCOMIS Naval Aviation Logistics Command Operating Maintenance
Information System
NATOPS Naval Aviation Training and Operating Program
Standardization
NAVAIR Naval Air Systems Command
NAVRIIP Naval Aviation Readiness Integrated Improvement
Program
NAVSUP Naval Supply Systems Command
NAVSUP WSS Naval Supply Systems Command (Weapons System Support)
NFHP Non-Flying Hour Program
NMC Non-Mission Capable

NMCM Non-Mission Capable Maintenance
NMCS Non-Mission Capable Supply

O

OTJ On-The-Job Training
O&S Operating & Support

P

PEO Program Executive Officer
PESTO People Equipment Supply Training Ordnance
PM Program Manager
PMA Program Management Activity
PMC Partial Mission Capable
PMI Planned Maintenance Interval
PRD Projected Rotation Dates
PRE Program Related Engineering
PRL Program Related Logistics
PSE Product Support Elements

Q

R

RBA Ready Basic Aircraft
RESP Remote Expeditionary Support Package
RFT Ready For Tasking
RLT Readiness Leadership Team
RMC Required Maintainer Competency
RS&P Readiness Standards & Policy

S

SAD Supply And Demand
SAS Stabilization Augmentation System
SBTP Sortie Based Training Plan
SCM Supply Chain Management
SO Strategic Objectives
SPI Scheduled Performance Index

T

TECOM Training and Education Command
TII Total Inactive Inventory
TF Total Force
TF CFT Total Force Cross-Functional Team
TOC Theory of Constraints
TPDR Technical Publication Deficiency Review
T-Rating Aircrew Training Readiness
T&R Training and Readiness

TRW TYCOM or TMS Readiness Workshop

U

USMC United States Marine Corps

V

VTC Video Teleconferences

W

WIP Work In Progress

WSPD Weapon Systems Planning Document

WSS Weapons Systems Support